STATE OF VERMONT

SUPERIOR COURT
CHITTENDEN UNIT

CIVIL DIVISION
DOCKET NO. 546-6-19 Cncv

State of Vermont

vs.

3M Company,
E. I. du Pont de Nemours and Company,
The Chemours Company,
The Chemours Company FC, LLC,
Corteva, Inc.,
DuPont de Nemours, Inc.,
Chemguard, Inc.,
Tyco Fire Products L.P.,
National Foam, Inc.,
Buckeye Fire Equipment Company, and
Kidde-Fenwal, Inc.

PLAINTIFF'S COMPLAINT

Plaintiff, the State of Vermont, as trustee of State natural resources, as owner of State property, and in its *parens patriae* capacity on behalf of its citizens, makes the following allegations against Defendants.

I. SUMMARY OF THE CASE

1. The State of Vermont, by and through Attorney General Thomas J. Donovan, Jr., brings this action to protect and restore State natural resources and State property from contamination and injury by per- and polyfluoroalkyl substances (PFAS) related to the use of aqueous film-forming foam (AFFF), a fire-fighting foam containing PFAS compounds.

2. Defendants are the manufacturers of PFAS-containing AFFF, and/or the manufacturers of PFAS, which include perfluorooctanesulfonic acid (PFOS), perfluorooctanoic acid (PFOA), perfluorononanoic acid (PFNA), perfluorohexanesulfonic acid (PFHxS), and perfluoroheptanoi

acid (PFHpA). As used in this Complaint, the terms PFOS, PFOA, PFNA, PFHxS, and PFHpA include those chemicals themselves (including all of their salts, ionic states and acid forms of the molecules) and the "precursor" chemicals that break down into these five pollutants.

3. PFAS are human-made, synthetic chemicals that do not exist naturally in the environment and are toxic at extremely low levels (in the parts per trillion (ppt)). The ubiquitous contamination and injury caused by these chemicals in Vermont has only recently come to light.

4. PFAS are known as "forever" chemicals because they persist in the environment for an indefinite (and very long) period of time. PFAS bioaccumulate in the human body and can bio-magnify in animals, particularly fish and "top of the food chain" mammals. PFAS exposure is correlated with a wide array of harmful health effects, including kidney and testicular cancer, ulcerative colitis, and adverse effects on the liver, the immune system, the thyroid, cholesterol levels, and fetal development during pregnancy.

5. AFFF was developed in the 1960s to be used for flammable liquid fire extinguishment, including flammable vapor suppression. Training with AFFF is a critical part of proper AFFF use. AFFF concentrate contains PFAS, including PFOA and PFOS, used to meet performance standards for fire extinguishing agents.

6. Defendants are major chemical companies that manufactured PFAS-containing AFFF and/or PFAS, including PFOS, PFOA, PFNA, PFHxS, and/or PFHpA.

7. Defendant 3M Company (3M) was the primary manufacturer of PFAS chemicals in the United States from the 1940s until 2002. 3M marketed and sold PFAS to be used in AFFF throughout the United States. 3M also manufactured and sold AFFF that contained PFAS compounds.

8. When 3M phased out production of PFOA, Defendant E. I. du Pont de Nemours Company (Historical DuPont) began manufacturing its own PFAS chemicals, despite knowing about the health and environmental risks of PFAS from its use of PFAS for consumer products starting in 1951. DuPont marketed and sold PFAS to be used in AFFF throughout the United States. In 2015, DuPont transferred its performance chemicals business and some associated liabilities to Defendant The Chemours Company and/or The Chemours Company FC, LLC (Chemours). Defendants Corteva, Inc. (Corteva) and DuPont de Nemours, Inc. (New DuPont) are other DuPont affiliates that manufactured PFAS chemicals and/or have succeeded to Historical DuPont's PFAS liabilities. Historical DuPont, Chemours, Corteva, and New DuPont are collectively referred to in this Complaint as "DuPont."

9. In addition to 3M, Defendants Chemguard Inc. (Chemguard), Tyco Fire Products L.P. (Tyco), National Foam, Inc. (National Foam"), Buckeye Fire Equipment Company (Buckeye), and Kidde-Fenwal, Inc. (Kidde) each manufactured AFFF that contained PFAS chemicals.

10. Defendants' AFFF products, which were sold and used in the State of Vermont, were unreasonably dangerous and the Defendants failed to warn of this danger. The result has been contamination and injury of State natural resources with AFFF-related PFAS.

11. 3M and DuPont knew for decades that PFAS chemicals were toxic and posed substantial health and environmental risks, but they continued to promote these chemical products for use in AFFF or, in the case of 3M, to use PFAS in the manufacture of its own AFFF products. Even though toxicity tests confirmed that 3M's AFFF product was "hazardous to marine life," 3M distributed ad brochures for its AFFF that stated that "[t]ests and actual use situations have shown that animal and aquatic life are not adversely affected." Despite its extensive knowledge of the dangers of PFAS, DuPont was a founding member of the Fire Fighting Foam Coalition,

which was formed to advocate for AFFF's continued viability despite the public beginning to become aware of its dangers. Each Defendant had access to information related to the dangers of PFAS compounds used in their AFFF products, but they kept this information hidden from the public as they continued to profit from the sale of AFFF products or PFAS to be used in AFFF.

12. PFAS related to the sale and uses of AFFF have contaminated Vermont drinking water, groundwater, surface water, wildlife, soil, and sediment.

13. Since the discovery of PFOA contamination in Bennington in 2016, the State has launched a statewide investigation to identify sources of PFAS contamination throughout the State, including sites where PFAS-containing AFFF were known to be used. Over the last three years, the State has discovered AFFF-related PFAS contamination at a number of locations in Vermont. Following these discoveries, in May of 2019, the Vermont Legislature enacted Act 21 of the 201 session, requiring (among other things) statewide sampling for PFAS contamination beginning no later than July 2019, which is to include sampling at locations where PFAS-containing AFFF was used. Pursuant to this new law, the State issued a PFAS Statewide Sampling Plan in June 2019. As the State continues its ongoing investigation of PFAS contamination throughout the State, it continues to discover additional PFAS contamination, including contamination related to the use of AFFF.

14. The State has the authority and responsibility to protect, conserve, and manage State natural resources for present and future generations. The State seeks damages and other relief for AFFF-related PFAS contamination and injury in its capacity as trustee of State natural resources and in its *parens patriae* capacity on behalf of the State. The State also acts to protect its own interests in property.

15. The State alleges that Defendants are: liable for natural resource damages; liable for altering the quality of groundwater as prohibited by 10 V.S.A. §1410; strictly liable for manufacturing and supplying defective products; strictly liable for failing to provide adequate warnings in connection with those products; liable for negligently causing damage to the State's natural resources and property, and to the property of citizens of the State; liable for creating a public nuisance; liable for creating a private nuisance; liable for trespass upon the State's natural resources and property, and property of citizens of the State; liable for violating the Voidable Transactions Act (E. I. du Pont de Nemours and Company, Corteva, Inc., DuPont de Nemours, Inc., and The Chemours Company only); and liable for all resulting damages, including punitive damages.

16. The State brings this action to recover compensatory damage and natural resource damages, to ensure that Defendants bear such expense, rather than the State or its citizens and taxpayers. These damages include restoration and loss-of-use damages and costs to investigate, monitor, abate, contain, prevent, treat, and remove AFFF-related PFAS from the State's natural resources and property. The State also seeks punitive damages to reflect Defendants' truly reprehensible conduct.

17. This Complaint alleges claims based on contamination caused by the five specific PFAS chemicals listed above (PFOS, PFOA, PFNA, PFHxS, and PFHpA), as well as their precursors, acids, salts, ionic forms, and byproducts. The State is not seeking to recover through this Complaint any relief for contamination and injury from PFAS that is not related to the manufacture and use of AFFF, which the State is addressing through a separate legal action. The State is also not seeking to recover through this Complaint any relief for past, present, or future personal injury claims or diminution in value of private property. Finally, although this

Complaint alleges claims based on these five specific PFAS chemicals, PFAS contamination, including AFFF-related PFAS contamination, is a rapidly developing issue, and additional information (potentially including information on other PFAS chemicals) is expected to come to light over the course of this litigation.

II. PLAINTIFF

18. Plaintiff is the State of Vermont, as represented by and through the Attorney General of the State of Vermont, with its principal office at 109 State Street, Montpelier, Vermont 05609-1001.

19. The State brings this action in its capacity as sovereign, as trustee of State natural resources and owner of property (or of substantial interests in property) contaminated and injured by Defendants, and pursuant to its *parens patriae* authority on behalf of the citizens of Vermont.

20. The State also brings this action based upon its statutory authority to protect State natural resources and its common law police power. This power includes, but is not limited to, its power to prevent pollution of the State's natural resources and property, to prevent nuisances, and to prevent and abate hazards to public health, safety, welfare, and the environment.

21. In this Complaint, the term "State's natural resources and property" refers to natural resources or property for which the State seeks damages, which may include fish, wildlife, biota, air, surface water, groundwater, wetlands, drinking water supplies, State-held public lands, and State-owned lands.

III. DEFENDANTS

22. Defendants are manufacturers, marketers, distributors, sellers, and promoters of PFAS-containing AFFF and/or PFAS for use in AFFF. The following Defendants, at times relevant to this action, manufactured, marketed, distributed, and/or otherwise sold (directly or indirectly)

PFAS-containing AFFF or PFAS for use in AFFF that each such Defendant knew or should have known would be delivered into areas affecting the State's natural resources and property, or otherwise did business in the State.

23. Defendant **3M Company (3M)** is a Delaware corporation with its principal place of business at 3M Center, St. Paul, Minnesota 55144. 3M Company may be served with process through its registered agent, Corporate Service Company, 100 North Main Street, Suite 2, Barre, Vermont. 3M does business throughout the United States, including conducting business in Vermont.

24. Defendant **Tyco Fire Products L.P. (Tyco)** is a Delaware limited partnership with principal offices at 1400 Pennbrook Parkway, Lansdale, Pennsylvania 19446. Tyco Fire Products L.P. may be served with process through its registered agent, The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801. Upon information and belief, Tyco is the successor-in-interest to Ansul, Inc. (Ansul). Tyco manufactures the Ansul brand of products. Tyco does business throughout the United States, including conducting business in Vermont.

25. Defendant **Buckeye Fire Equipment Company (Buckeye)** is a corporation organized under the laws of the State of Ohio, with principal offices at 110 Kings Road, Kings Mountain, North Carolina 28086. Buckeye may be served with process through its registered agent Thomas J. Bower, 110 Kings Road, Kings Mountain, North Carolina 28086. Buckeye does business throughout the United States, including conducting business in Vermont.

26. Defendant **Chemguard, Inc. (Chemguard)** is a corporation organized under the laws of the State of Texas, with principal offices at One Stanton Street, Marinette, Wisconsin 54143-2542. Chemguard may be served with process through its registered agent The Prentice Hill

Corporation System, Inc., 251 Little Falls Drive, Wilmington, Delaware 19808. Chemguard does business throughout the United States, including conducting business in Vermont.

27. Defendant **National Foam, Inc. (National Foam)** is a corporation organized under the laws of the State of Delaware, with principal offices at 141 Junny Road, Angier, North Carolina 27501. National Foam may be served with process through its registered agent, The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801. National Foam is the successor in interest to Angus Fire Armour Corporation, and manufactures the Angus brand of products. National Foam does business throughout the United States, including conducting business in Vermont.

28. Defendant **Kidde-Fenwal, Inc. (Kidde)** is a corporation organized under the laws of the State of Delaware, with its principal place of business located at One Financial Plaza, Hartford, Connecticut 06101. Kidde may be served with process at 400 Main Street, Ashland Massachusetts 01721. Kidde is the successor-in-interest to Kidde Fire Fighting, Inc. (f/k/a Chubb National Foam, Inc. f/k/a National Foam System, Inc.). Kidde does business throughout the United States, including conducting business in Vermont.

29. Defendant **E. I. du Pont de Nemours and Company (Historical DuPont)** is a Delaware corporation with its principal place of business at 974 Centre Road, Wilmington, Delaware 19805. E. I. du Pont de Nemours and Company may be served with process through its registered agent, CT Corporation System, 17 G W Tatro Drive, Jeffersonville, Vermont, 05464-9919. E.I. Du Pont de Nemours and Company does business throughout the United States, including conducting business in Vermont.

30. Defendant **The Chemours Company** is a Delaware corporation with its principal place of business at 1007 Market Street, Wilmington, Delaware 19899. The Chemours Company may

be served with process through its registered agent, CT Corporation System, 17 G W Tatro Drive, Jeffersonville, Vermont, 05464-9919. The Chemours Company does business throughout the United States, including conducting business in Vermont.

31. The Chemours Company was incorporated as a subsidiary of Historical DuPont as of April 30, 2015. From that time until July, 2015, The Chemours Company was a wholly-owned subsidiary of Historical DuPont. In July, 2015, E.I. Du Pont de Nemours and Company spun off The Chemours Company and transferred to The Chemours Company its "performance chemicals" business line, which includes its fluoroproducts business, distributing shares of The Chemours Company stock to Historical DuPont stockholders, and The Chemours Company has since been an independent, publicly traded company.

32. Defendant **The Chemours Company FC, LLC** is a Delaware corporation with its principal place of business at 1007 Market Street, Wilmington, Delaware. The Chemours Company FC, LLC may be served with process through its registered agent, CT Corporation System, 17 G W Tatro Drive, Jeffersonville, Vermont, 05464-9919. The Chemours Company FC, LLC operates as a subsidiary of The Chemours Company and manufactures fluoropolymer resins.

33. The Chemours Company and The Chemours Company FC, LLC are collectively referred to throughout this Complaint as "Chemours."

34. Historical DuPont merged with The Dow Chemical Company in August 2017 to create DowDuPont Inc. (DowDuPont). Historical DuPont and The Dow Chemical Company each merged with wholly-owned subsidiaries of DowDuPont and, as a result, became subsidiaries of DowDuPont. Since that time, DowDuPont has effected a series of separation transactions to

separate its businesses into three independent, publicly-traded companies for each of its agriculture, materials science, and specialty products businesses, discussed below.

35. Defendant **Corteva, Inc.** is a Delaware corporation with its principal place of business at 974 Centre Road, Wilmington, Delaware. Corteva, Inc. may be served with process through its registered agent CT Corporation System, 17 G W Tatro Drive, Jeffersonville, Vermont, 05464-9919. Corteva Inc. does business throughout the United States, including conducting business in Vermont.

36. On June 1, 2019, DowDuPont separated its agriculture business through the spin-off of Corteva, Inc.

37. Corteva, Inc. was initially formed in February 2018. From that time until June 1, 2019, Corteva was a wholly-owned subsidiary of DowDuPont.

38. On June 1, 2019, DowDuPont distributed to DowDuPont stockholders all issued and outstanding shares of Corteva, Inc. common stock by way of a pro rata dividend. Following that distribution, Corteva, Inc. is the direct parent of Historical DuPont (*i.e.*, E. I. du Pont de Nemours and Company) and holds certain DowDuPont assets and liabilities, including DowDuPont's agriculture and nutritional businesses.

39. Defendant **DuPont de Nemours, Inc.** (f/k/a DowDuPont Inc.) is a Delaware corporation with its principal place of business at 974 Centre Road, Wilmington, Delaware 19805. DuPont de Nemours, Inc. may be served with process through its registered agent in Delaware, The Corporation Trust Company, Corporation Trust Center 1209 Orange Street, Wilmington, DE 19801. DuPont de Nemours, Inc. does business throughout the United States, including conducting business in Vermont.

40. On June 1, 2019, DowDuPont, the surviving entity after the spin-off of Corteva, Inc. and of another entity known as Dow, Inc., changed its name to DuPont de Nemours, Inc., to be known as DuPont (New DuPont). New DuPont retained assets in the specialty products business lines following the above described spin-offs, as well as the balance of the financial assets and liabilities of Historical DuPont not assumed by Corteva, Inc.

41. Defendants E. I. du Pont de Nemours and Company; The Chemours Company; The Chemours Company FC, LLC; Corteva, Inc.; and DuPont de Nemours, Inc. are collectively referred to as "DuPont" throughout this Complaint.

42. In 2001, DuPont became a founding member of the Fire Fighting Foam Coalition (FFFC).

43. In part, through its involvement in the FFFC, DuPont actively marketed its fluorosurfactants, which contain PFAS, to AFFF manufacturers for use in the production of AFFF.

44. Some or all of the AFFF manufactured and sold by the Defendants contained fluorosurfactants manufactured and sold by DuPont.

45. 3M Company; E.I. Du Pont de Nemours and Company; The Chemours Company; The Chemours Company FC, LLC; Corteva, Inc.; and DuPont de Nemours, Inc.; Chemguard, Inc.; Tyco Fire Products L.P.; National Foam, Inc.; Buckeye Fire Equipment Company; and Kidde-Frenwal, Inc. are collectively referred to as "Defendants."

46. Defendants, among other things: (a) designed, manufactured, formulated, promoted, marketed, sold, and/or otherwise supplied (directly or indirectly) PFAS-containing AFFF and/or PFAS for use in AFFF that was delivered into areas affecting the State's natural resources and property, such that AFFF-related PFAS have contaminated and threaten the State's natural

resources and property; (b) acted with actual or constructive knowledge that PFAS-containing AFFF and/or PFAS for use in AFFF would be delivered into areas affecting the State's natural resources and property; (c) are legally responsible for and committed each of the multiple tortious and wrongful acts alleged in this Complaint; and (d) promoted PFAS-containing AFFF and/or PFAS for use in AFFF, despite the availability of reasonable alternatives and their actual or constructive knowledge that the pollution alleged in this Complaint would be the inevitable result of their conduct.

47. To the extent any act or omission of any Defendant is alleged in this Complaint, the officers, directors, agents, employees, or representatives of each such Defendant committed or authorized each such act or omission, or failed to adequately supervise or properly control or direct their employees while engaged in the management, direction, operation, or control of the affairs of such Defendants, and did so while acting within the scope of their duties, employment or agency.

48. Any and all references to a Defendant or Defendants in this Complaint include any predecessors, successors, parents, subsidiaries, affiliates, and divisions of the named Defendants.

IV. JURISDICTION AND VENUE

49. This Court has jurisdiction over the subject matter of this action pursuant to 4 V.S.A. § 31. This Court may exercise jurisdiction over Defendants because they either are or at the relevant time were: authorized to do business in Vermont, registered with the Vermont Secretary of State, transacting sufficient business with sufficient minimum contacts in Vermont, or otherwise intentionally availing themselves of the Vermont market through the manufacturing, marketing, distribution, and/or sale of PFAS-containing AFFF and/or PFAS for use in AFFF in Vermont so as to satisfy minimum contacts and to render the exercise of jurisdiction over

Defendants by the Vermont courts consistent with traditional notions of fair play and substantial justice.

50. Venue is proper in this Court because the State is the plaintiff and State natural resources and/or property have been contaminated, injured, and damaged by AFFF-related PFAS contamination in Chittenden County.

V. AFFF-RELATED PFAS ARE TOXIC AND POSE SUBSTANTIAL HEALTH AND ENVIRONMENTAL RISKS

51. AFFF is a foam intended for fighting high-hazard flammable liquid fires.

52. AFFF products are typically formed by combining hydrocarbon foaming agents with fluorinated surfactants. PFAS are the active ingredients in fluorosurfactants.

53. PFAS are a family of chemical compounds containing fluorine and carbon atoms.

54. PFAS are humanmade, synthetic chemicals that do not exist naturally in the environment.

55. PFAS, which include PFOS, PFOA, PFNA, PFHxS, and PFHpA, are persistent in the environment and do not readily break down or biodegrade. PFOS, PFOA, PFNA, PFHxS, and PFHpA are stable in the environment and will persist for an indefinite (and very long) period of time. Because of their persistence, unless PFOS, PFOA, PFNA, PFHxS, and PFHpA are actively cleaned up from contaminated State natural resources and property, these chemicals will remain and continue to contaminate State natural resources and property indefinitely. While it is possible to clean up PFAS from certain State natural resources and State property, it is difficult and expensive to do so.

56. PFOS, PFOA, PFNA, PFHxS, and PFHpA are soluble in water, do not adsorb or stick to soil particles, are mobile in the environment, and migrate long distances through soil and groundwater.

57. PFOS, PFOA, PFNA, PFHxS, and PFHpA are transported long distances through the air.

58. The pernicious characteristics of PFOS, PFOA, PFNA, PFHxS, and PFHpA mean that once these chemicals are released into the environment, they migrate into and cause extensive contamination of State natural resources and property.

59. PFOS, PFOA, PFNA, PFHxS, and PFHpA bioaccumulate and biomagnify in humans and in wildlife such as fish.

60. PFOS, PFOA, PFNA, PFHxS, and PFHpA are toxic to humans at extremely low levels.

61. PFOS, PFOA, PFNA, PFHxS, and PFHpA are difficult and costly to treat and remove from State natural resources and property.

62. Exposure to certain PFAS is associated with harmful and serious health effects in humans and animals, including but not limited to:

a. altered growth;

b. impacts to learning and behavior of infants and children;

c. lowering a woman's chance of getting pregnant;

d. interference with the body's natural hormones;

e. increased cholesterol levels;

f. modulation of the immune system; and

g. increased risks of testicular and kidney cancers.

Some or all of these health effects are associated with PFOS, PFOA, PFNA, PFHxS, and PFHpA.

63. PFOS, PFOA, PFNA, PFHxS, and PFHpA contamination is a serious threat to human health and State natural resources and property.

64. Humans are exposed to PFOS, PFOA, PFNA, PFHxS, and PFHpA through ingestion of drinking water and contaminated food, inhalation, and dermal contact, among other pathways.

65. Known pathways for AFFF-related PFAS to enter the environment include releases to air, waters, and soil from extinguishment of non-training fires, fire-fighting drills, and other related normal and foreseeable use and disposal.

66. AFFF is commonly stored and used by chemical plants; flammable liquid storage and processing facilities; airports; HAZMAT teams; military facilities; fire training facilities; local fire departments; and merchant operations, such as oil tankers and offshore platforms.

67. In addition to PFOS, PFOA, PFNA, PFHxS, and/or PFHpA, other PFAS contaminants are also associated with AFFF.

VI. VERMONT IS INVESTIGATING PFAS CONTAMINATION, INCLUDING AFFF-RELATED CONTAMINATION

68. The State of Vermont has conducted a series of investigations and collected sampling data to identify, characterize, and address risks to public health and State natural resources as quickly as possible. The State's investigation and response are ongoing given the scope of the problem and the fact that knowledge of the public health and environmental risks associated with PFAS is evolving.

69. The Vermont Department of Health has developed a health advisory for five PFAS to protect public health, that the cumulative level of PFOS, PFOA, PFNA, PFHxS, and PFHpA in drinking water should not exceed 20 ppt. The Vermont Agency of Natural Resources used this advisory to help establish a groundwater quality enforcement standard, as described below.

A. Statewide PFAS Investigations

70. In February 2016, the Vermont Department of Environmental Conservation (DEC) discovered PFAS contamination in Bennington associated with a former Teflon coating facilities in Bennington and North Bennington.

71. Since that first discovery, the Vermont Agency of Natural Resources (ANR) through the DEC has undertaken a broader investigation to identify PFAS contamination in Vermont and the most likely sources of PFAS contamination, including locations where PFAS-containing AFFF was known to be stored and/or used. This investigation is ongoing.

72. The State investigated the use of AFFF in Vermont by searching spill reports for hazardous material fires, tanker fires, and other rollovers and crashes, as well as identifying sites where AFFF was likely to be used, such as military bases, airports, and fire training academies. The State then performed targeted sampling at several of these locations throughout the State. The State continues to identify and sample other sources of AFFF-related PFAS contamination.

73. In July 2018, the DEC issued its *Perfluoroalkyl Substances (PFAS) Contamination Status Report*, which provided an overview of the findings of DEC's investigations to date. The Status Report summarized findings from a variety of sampling sites, which confirmed the presence of AFFF-related PFAS contamination at four sites within the State, including the Air National Guard facility in South Burlington; the Camp Ethan Allen Training Site in Jericho/Underhill; the Vermont Fire Training Academy in Pittsford; and the Southern Vermont Airport in Clarendon.

74. The Status Report also made recommendations on additional work needed in the future, including additional sampling.

75. In June 2019, DEC published a *Perfluoroalkyl Substances (PFAS) Statewide Sampling Plan*. The 2019 Plan was submitted pursuant to S. 49, a bill passed in 2019 by the Vermont Legislature, which directs the ANR Secretary to publish a plan for a statewide investigation of potential sources of PFAS contamination, which includes AFFF-related PFAS contamination, for public review and comment. The law requires the Secretary of Natural Resources to begin implementing this statewide sampling plan by no later than July 1, 2019.

76. In response to the State's findings regarding AFFF, the DEC worked with the Division of Fire Safety to survey fire departments in Vermont that may have used or stored PFAS-containing AFFF to determine its location and potentially dispose of remaining supplies. So far, 89 fire departments have responded to a survey sent to all local, municipal, and city fire chiefs in the State, with 29 departments responding that they have AFFF in storage, some of which was more than 20 years old. The survey indicated a clear need for the disposal of AFFF.

77. In the fall of 2018, the DEC initiated the AFFF Takeback Program. A total of 10.24 tons (approximately 2,150 gallons) of AFFF concentrate was collected from 38 municipal and city fire departments throughout the State. Many of the containers collected were in poor condition and thus vulnerable to leaks, and some fire departments had pumper trucks filled with legacy AFFF formulations in service and ready for use for their next flammable liquid fire. Fire departments provided positive feedback for the takeback program as they did not want to cause environmental damage in their communities as a result of responding to emergencies.

B. Vermont PFAS Standards

78. In 2016, the Vermont Department of Health (VDH) issued a drinking water health advisory of 20 ppt applicable to the combined level of both PFOA and PFOS. In July 2018, VDH issued a revised health advisory, which added three additional PFAS compounds – PFHxS, PFHpA, and PFNA – to the 20 ppt standard (Health Advisory). Thus, the current Health Advisory of 20 ppt is applicable to the sum of PFOA, PFOS, PFHxS, PFHpA, and PFNA. Information on the health and environmental risks of PFAS is still being developed, and the federal government and other states are continuing to lower health advisories and related standards for PFAS chemicals as more information on the toxicity of these pernicious chemicals

becomes known. Vermont's Health Advisory may be revised as additional data and information become available.

79. Each of the five PFAS compounds subject to the State's Health Advisory poses significant human health risks.

80. PFOA and PFOS target many organ systems, including but not limited to the liver, endocrine, and the immune system.

81. The National Toxicology Program, a Division of the National Institute of Environmental Health Sciences, concludes that PFOA and PFOS are presumed to be immune hazards to humans, based on high levels of evidence in animals that PFOA and PFOS suppress the antibody response. "Presumed" is a term of art that means one level of certainty below a known human hazard.

82. Exposure to PFOA and PFOS is also associated with developmental toxicity, including neurodevelopmental effects and skeletal alterations.

83. Toxicity studies indicate that exposure to PFHxS, PFHpA, and PFNA have similar impacts as exposure to PFOA and PFOS, including but not limited to immunotoxicity, disruption of the endocrine system, developmental toxicity, and liver toxicity.

84. The combination of multiple PFAS also poses a substantial risk to human health. PFOA, PFOS, PFHxS, PFHpA, and PFNA are often found together. Further, some PFAS chemicals degrade into other PFAS chemicals.

85. The DEC has also promulgated rules establishing the Health Advisory for PFAS as a groundwater quality enforcement standard, and listing PFOA, PFOS, PFHxS, PFHpA, and PFNA as hazardous materials. These rules are currently in effect on an emergency basis; permanent versions of the rules are expected to go into effect on July 6, 2019.

VII. DEFENDANTS HAVE CAUSED AFFF-RELATED PFAS CONTAMINATION AND INJURY IN VERMONT

A. Defendants' Manufacturing of PFAS for Use in AFFF and PFAS-Containing AFFF.

86. AFFF is a fire-suppressing foam used to extinguish flammable liquid fires, including jet-fuel fires, aviation-related fires, hangar fires, ship fires, vehicle fires, and chemical fires, and is routinely used to train firefighters and test firefighting equipment.

87. As a reference, a single firefighting training event can release thousands of gallons of foam-laced water into the environment.

88. The following image, reprinted as part of the investigative series published by journalists at The Intercept, depicts firefighting training exercises/suppression system testing, drenching the test space in AFFF.

89. For decades, PFAS have been used in the manufacture of AFFF.

90. The PFAS family of chemicals are entirely human-made and do not exist in nature.

91. 3M was the primary manufacturer of PFAS chemicals in the United States from the 1940s through the early 2000s.

92. 3M manufactured PFAS by electrochemical fluorination beginning in the 1940s. The electrochemical fluorination process results in a product that contains and/or breaks down into compounds containing PFOS, PFOA, PFNA, PFHxS, and/or PFHpA, among other PFAS.

93. 3M was a major manufacturer of PFOA.

94. 3M was the only known manufacturer of PFOS and PFHxS in the United States.

95. In response to pressure from the United States Environmental Protection Agency (EPA), 3M began to phase out production of PFOS and PFOA products in 2000.

96. Although DuPont knew about the health and environmental risks of PFAS from its use of PFAS starting in 1951, DuPont began manufacturing its own PFAS chemicals in 2002 for use in manufacturing when 3M phased out production of PFOA. DuPont continued to manufacture, market, and sell PFOA until 2013.

97. 3M and DuPont were the only companies to manufacture PFOA in the United States.

98. 3M manufactured PFOA and PFOS as raw chemical materials for use in 3M products, including its own AFFF products and AFFF products made by third parties from the 1960s to the early 2000s.

99. 3M marketed and sold PFAS and AFFF containing PFAS throughout the United States, including in Vermont.

100. 3M sold AFFF products containing PFAS to the United States Department of Defense (DOD) and others from approximately 1964 through at least 2000.

101. In the late 1960s, the United States military issued military specification MIL-F-24385 governing the requirements for AFFF (AFFF Mil-Spec). It requires that the AFFF concentrate "consist of fluorocarbon surfactants plus other compounds. . . . " The AFFF Mil-Spec, however,

contains no further requirements concerning these fluorocarbons surfactants, such as the length of the fluorine-carbon chain.

102. The AFFF Mil-Spec also states that "[t]he material shall have no adverse effect on the health of personnel when used for its intended purpose." The current version of the AFFF Mil-Spec still contains that language.

103. National Foam and Tyco began to manufacture, market, and sell PFAS-containing AFFF in the 1970s.

104. From the 1960s through 2001, the DOD purchased AFFF exclusively from 3M and Tyco.

105. Angus Fire and Chemguard began to manufacture, market, and sell PFAS-containing AFFF in the 1990s.

106. Buckeye began to manufacture, market, and sell PFAS-containing AFFF in the 2000s.

107. 3M, Chemguard, Tyco, National Foam, Buckeye, and Kidde and/or their predecessors also sold AFFF products to DOD.

108. After 3M exited the AFFF market in 2000, the remaining Defendants continued to manufacture and sell AFFF and/or PFAS compounds to be used in AFFF.

109. Chemguard, Tyco, National Foam, Buckeye, and Kidde AFFF products also contain PFAS and their precursors.

110. 3M, Chemguard, Tyco, National Foam, Buckeye, and Kidde advertised, offered for sale, and sold AFFF to the military as well as State government entities, counties, municipalities, local fire departments, and/or other governmental entities and quasi-governmental entities for use in Vermont.

111. When used as intended, AFFF will contaminate the environment in a variety of ways, including but not limited to, through soil, surface water and groundwater, in relation to

firefighting events, training exercises, fire preparations, equipment maintenance, and other activities.

112. The manufacture, distribution and/or sale of AFFF by 3M, Chemguard, Tyco, National Foam, Buckeye, and Kidde resulted in the release of PFOS, PFOA, PFNA, PFHxS, and/or PFHpA into the environment.

113. 3M, Chemguard, Tyco, National Foam, Buckeye, and Kidde, through their manufacturing, distribution and/or sale of AFFF, and through their involvement and/or participation in the creation of training and instructional materials and activities, knew, foresaw, and/or should have known and/or foreseen that PFOS, PFOA, PFNA, PFHxS, and/or PFHpA, would contaminate the environment.

114. 3M, Chemguard, Tyco, National Foam, Buckeye, and Kidde were and/or should have been aware, knew and/or should have known, and/or foresaw and/or should have foreseen that their marketing, development, manufacture, distribution, release, training of users of, production of instructional materials about, sale and/or use or disposal of AFFF, including in Vermont, would result in the contamination and injury of the State's natural resources and property.

115. 3M, Chemguard, Tyco, National Foam, Buckeye, and Kidde's AFFF products were unreasonably dangerous and the Defendants failed to warn of this danger.

116. 3M, Chemguard, Tyco, National Foam, Buckeye, and Kidde knew their customers warehoused large stockpiles of AFFF and touted the shelf-life of AFFF.

117. While 3M, Chemguard, Tyco, National Foam, Buckeye, and Kidde phased out production or transitioned to new formulas of AFFF, they did not instruct users of AFFF that they should not use existing stockpiles AFFF that contained PFOS, PFOA, PFNA, PFHxS, and/or PFHpA, and/or their precursors.

118. 3M, Chemguard, Tyco, National Foam, Buckeye, and Kidde further did not act to remove AFFF from the stream of commerce.

119. 3M, Chemguard, Tyco, National Foam, Buckeye, and Kidde did not warn public entities or others that AFFF would harm the environment, endanger human health, or cause them to incur substantial costs to investigate and clean up contamination of groundwater and other natural resources and to dispose of AFFF.

120. Accordingly, for many years after the original sale of AFFF, these AFFF products were and are still being applied directly to the ground, discharged into floor drains and washed into sediments, soils, and waters, harming the environment and endangering human health.

121. 3M, Chemguard, Tyco, National Foam, Buckeye, and Kidde did not properly instruct users, consumers, public officials or those who were in a position to properly guard against the dangers of PFAS that they needed to properly dispose of their stockpiles of AFFF or how to properly dispose of AFFF.

122. DuPont also manufactured, marketed, and sold PFAS to be used in AFFF throughout the United States.

123. In part, through its involvement in the FFFC, DuPont actively marketed its fluorosurfactants to AFFF manufacturers for use in the production of AFFF.

124. Some or all of the AFFF manufactured and sold by the Defendants contained fluorosurfactants manufactured and sold by 3M or DuPont.

125. DuPont's manufacture, distribution, and/or sale of fluorosurfactants used in the manufacture of AFFF resulted in the release of PFAS into the environment.

126. DuPont, through its manufacturing, distribution, and/or sale of fluorosurfactants used in the manufacture of AFFF, and through its involvement and/or participation in the creation of

training and instructional materials and activities, knew, foresaw, and/or should have known and/or foreseen that PFAS would contaminate the environment.

127. DuPont was and/or should have been aware, knew and/or should have known, and/or foresaw and/or should have foreseen that its marketing, development, manufacture, distribution, release, training of users of, production of instructional materials about, sale, and/or use or disposal of fluorosurfactants used in the manufacture of AFFF, including in Vermont, would result in the contamination and injury of the State's natural resources and property.

128. Defendants' products were unreasonably dangerous and the Defendants failed to warn of this danger.

129. Practical and feasible alternative designs capable of reducing the State's injuries were available.

130. Defendants knew, or should have known, that PFOS, PFOA, PFNA, PFHxS, and/or PFHpA would contaminate the environment through their manufacturing, marketing, distribution, and sales of PFAS chemicals to be used in AFFF and/or AFFF containing PFAS.

131. Defendants knew, or should have known, that their manufacturing, marketing, distribution, and sales of AFFF containing PFOS, PFOA, PFNA, PFHxS, and/or PFHpA and/or PFOS, PFOA, PFNA, PFHxS, and/or PFHpA for use in AFFF, including in Vermont, would result in contamination and injury of the State's natural resources and property.

B. 3M Has Known for Decades of PFAS Health and Environmental Risks.

132. 3M knew of the health hazards and environmental risks and impacts posed by PFAS and its PFAS-containing AFFF products for decades but continued to manufacture, market, distribute, and/or sell PFAS for use in AFFF and AFFF containing PFAS for decades.

133. Based on its own internal studies, 3M knew that PFOA and PFOS were harmful to humans and the environment as early as the 1950s.

134. In the 1950s, 3M knew that PFAS chemicals had the ability to move throughout groundwater. By 1960, 3M knew that PFOA and PFOS were capable of leaching into the groundwater and contaminating the environment. For example, chemical wastes from its PFAS manufacturing were known to be able to leach from its waste dumps into groundwater and pollute underground basins. An internal memo from 1960 described 3M's understanding that such wastes "[would] eventually reach the water table and pollute domestic wells."

135. By the early 1960s, 3M understood that some PFAS are stable and persist in the environment and that they do not degrade.

136. 3M failed to disclose the risks to regulators or to the public.

137. 3M began testing the physiological and toxicological properties of PFAS compounds as early as 1950.

138. 3M began testing for PFAS in well waters in the 1960s and in 1960 confirmed the presence of surfactant pollution in the wells.

139. A 1963 3M report described PFAS as being stable in the environment, "completely resistant to biological attack," and also confirmed that 3M knew the chemicals to be "toxic."

140. In the 1970s, 3M researchers documented PFOA and PFOS chemicals in fish.

141. At that time, 3M was aware that its AFFF products were hazardous to marine life. In fact, effects of toxicity testing of 3M's "Light Water" line of PFAS-containing AFFF conducted in 1970 were, according to an outside researcher, "highly derogatory to marine life and the entire test program had to be abandoned to avoid severe local stream pollution."

142. Toxicity tests conducted in 1972 on 3M's Light Water AFFF on bluegill, grass shrimp, fiddler crab, and mummichog further confirmed the AFFF's toxicity. After exposure to a 33.4 mg/l concentration of Light Water AFFF, 100% of bluegills died.

143. Despite these findings, 3M's 1978 advertising brochure touted Light Water AFFF as "biodegradable" and "low in toxicity." Specifically, the ad stated that "[t]ests and actual use situations have shown that animal and aquatic life are not adversely affected." Further, it stated that "as a foam solution, there are no noticeable negative effects."

144. In 1975, 3M scientists were informed that PFAS had been found within, and could build up in, the human body. The source of these chemicals was suspected by a researcher at the University of Florida investigating the matter to be Teflon cookware or "Scotchguarded" fabrics, but when questioned about these concerns, 3M researchers said that they "plead[ed] ignorance."

145. In the 1970s, 3M began monitoring the blood of its employees for PFAS because 3M was concerned about the health effects of PFAS, and in 1976, confirmed that PFAS chemicals were in fact in its workers' blood. For example, 3M measured fluorochemicals in the blood of workers at its PFAS-manufacturing plant in Cottage Grove, Minnesota at "1,000 times normal."

146. In 1975, 3M found PFOA to be "widespread in human plasma" according to samples taken from across the United States.

147. Since PFOA is not naturally occurring, these findings in blood in the human body reasonably should have alerted 3M that it was likely that its products were a source of this PFOA—a possibility that 3M considered internally but did not share outside the company.

148. These findings also should have alerted 3M that PFOA is mobile, persistent, bioaccumulative, and biomagnifying, as those characteristics would explain the presence of PFOA from 3M's products in blood.

149. In 1978, 3M studied, and independent experts confirmed, the risks of PFAS. A 3M internal report from 1978 warned that PFAS chemicals "are likely to persist in the environment for extended periods."

150. Similarly, a 3M internal document from 1979 stated that PFOA and PFOS "are known to persist for a long time in the body and thereby give long term chronic exposure."

151. A 1979 report drew a direct line between effluent from 3M's Decatur, Alabama plant and PFAS bioaccumulating in fish tissue taken from the Tennessee River.

152. Results of a 90-day animal study conducted by 3M in 1978 indicated that PFAS "should be regarded as toxic," and that those aware of the results "urgently recommended that all reasonable steps be taken immediately to reduce exposure of employees to these compounds."

153. A 1979 report further discussing the study on PFOS and PFOA toxicity to animals stated that the compounds were "more toxic than anticipated," and further recommended that "lifetime rodent studies . . . be undertaken as soon as possible."

154. Despite these warnings and recommendations, 3M decided to not publish the findings of this investigation.

155. A 1979 memo from M.T. Case, formerly within 3M's medical department in Corporate Toxicology and Regulatory Services, stated that he believed it "paramount to begin now an assessment of the potential (if any) of long term (carcinogenic) effects for these compounds which are known to persist for a long time in the body and thereby give long-term chronic exposure."

156. At a meeting among 3M employees in June of 1979 discussing the "Fluorochemicals in Blood Program," an outside researcher named Dr. H.C. Hodge noted that "[r]eduction in exposure [to 3M employees to fluorochemicals] should have a top priority" and that further

testing be conducted. According to Dr. Hodge, "[i]t should be determined if FC-807 [a PFAS chemical] or its metabolites are present in man, what level they are present, and the degree of persistence (half-life) of these materials."

157. In 1981, 3M moved 25 female employees "of childbearing potential" off production lines at its Decatur, Alabama plant "[a]s a precautionary measure." This was based on internal research showing that PFAS compounds were causing birth defects in rats. Yet 3M did not alert the public or regulatory agencies of its concerns with effects of exposure to PFAS.

158. In 1983, 3M scientists concluded that concerns about PFAS "give rise to concern for environmental safety," including "legitimate questions about the persistence, accumulation potential, and ecotoxicity of fluorochemicals in the environment."

159. Even then, 3M's practices were concerning even to its own employees. In March 1999, 3M environmental scientist Rich Purdy wrote to 3M and expressed his "profound disappointment" with "3M's handling of the environmental risks associated with the manufacture and use of" PFOS. Mr. Purdy described PFOS as "the most insidious pollutant since PCB," and that it is "probably more damaging than PCB because it does not degrade, where as PCB does; it is more toxic to wildlife; and its sink in the environment appears to be biota and not soil and sediment, as is the case with PCB." Mr. Purdy described his attempts to discuss the dangers of the chemical with the company, and 3M's refusal to act. Finally, Mr. Purdy stated that "I can no longer participate in the process that 3M has established for the management of [PFAS.] For me it is unethical to be concerned with markets, legal defensibility and image over environmental safety."

160. Despite decades of research, 3M first shared its concerns with EPA in the late 1990s. In a May 1998 report submitted to EPA, "3M chose to report simply that PFOS had been found in

the blood of animals, which is true but omits the most significant information" according to a former 3M employee.

161. In response to pressure from EPA, 3M began to phase out production of PFOS and PFOA products in 2000.

162. In connection with the phase out, 3M issued a press release asserting that "our products are safe," citing the company's "principles of responsible environmental management" as the reason to cease production.

163. The EPA press release regarding 3M's phase-out of PFOS and PFOA presented a different story, stating: "3M data supplied to EPA indicated that these chemicals are very persistent in the environment, have a strong tendency to accumulate in human and animal tissues and could potentially pose a risk to human health and the environment over the long term."

164. 3M worked to control and distort the science on PFAS. For example, 3M provided millions of dollars in grants to a professor, John Giesy, who publicly presented himself as independent but worked for 3M behind the scenes. Giesy's goal, as expressed in a March 25, 2008 email, was to "keep 'bad' papers [regarding PFAS] out of the literature [because] otherwise in litigation situations they can be a large obstacle to refute."

165. In 2006, EPA cited 3M for 244 violations of the Toxic Substances Control Act, accusing 3M of failing to notify the agency about new chemicals and of late reporting of "substantial risk information." 3M was fined $1.52 million for these violations.

166. Despite the large body of research demonstrating the serious health risks posed by PFAS, much of which 3M has been aware for decades, as recently as *November 2018*, 3M stated that "the vast body of scientific evidence does not show that PFOS or PFOA cause adverse

health effects in humans at current exposure levels, or even at the historically higher levels found in blood."

167. 3M knew or should have known that in their intended and/or common use, products containing PFAS would injure and/or threaten public health and the environment in Vermont.

C. DuPont Has Known for Decades of PFAS Health and Environmental Risks

168. Like 3M, DuPont has known for decades of the health and environmental risks of PFAS but instead of warning the public, users or consumers about such risks, covered up this information and promoted PFAS and PFAS-containing products as safe.

169. In approximately 1951, DuPont started using PFOA in making Teflon at its Washington Works manufacturing plant in Parkersburg, West Virginia. As early as 1954, employees at DuPont's Washington Works plant reported that C-8 (another name for PFOA) might be toxic. DuPont was concerned enough about the complaints that it delayed marketing Teflon containing PFOA to the public. In 1961, seven years later, Teflon consumer products hit the marketplace.

170. By 1961, DuPont's researchers had concluded that PFOA was toxic and DuPont's chief toxicologist, Dorothy Hood, warned in a memo to executives that products containing PFOA should be "handled with extreme care." As early as the 1960s, DuPont knew that PFOA caused adverse liver reactions in dogs and rats.

171. As early as 1966, DuPont was aware that PFOA could leach into groundwater.

172. By 1976, DuPont knew about research showing detections of organic fluorine in blood bank samples in the United States, which the researchers thought could be a potential result of human exposure to PFOA.

173. In 1978, DuPont's medical director published an article in the *Bulletin of the New York Academy of Medicine* in which he acknowledged DuPont's duty to "to discover and reveal the

unvarnished facts about health hazards," and that a company "should be candid, and lay all the facts on the table. This is the only responsible and ethical way to go."

174. By 1979, DuPont had data indicating that its workers who were exposed to PFOA had a significantly higher frequency of health issues compared to unexposed workers but did not report this data to any government agency or any community where it used PFOA.

175. By at least 1980, DuPont had internally confirmed that PFOA "is toxic," that "continued exposure is not tolerable," and that people accumulate PFOA in their bodies.

176. By at least 1981, DuPont had obtained a 3M internal study that had documented birth defects in the eyes of unborn rats exposed to PFOA in utero and urged female workers who came into contact with PFOA to consult their doctors "prior to contemplating pregnancy." Around this same time, a DuPont worker in the Teflon division of the Washington Works plant who was pregnant began moving PFOA waste into pits using a pump-like device as part of her job responsibilities. Tragically, when the DuPont employee gave birth in January 1981, the baby had only half a nose and a ragged eyelid that gaped down to the middle of his cheek. This was consistent with the 3M study and in March 1981, DuPont had a pathologist and a birth defects expert review the 3M study. They concluded that "the study was valid" and that "the observed fetal eye defects were due to C8." DuPont immediately removed all female workers from areas where they might come into contact with PFOA.

177. In April 1981, DuPont began secretly monitoring 50 female employees who had been exposed to PFOA. As DuPont's medical director Bruce Karrh explained in a memo, this monitoring was undertaken to "answer a single question—does C8 cause abnormal children?" Initial data showed that two of the seven pregnant workers exposed to PFOA had babies with eye

and nostril deformities, which the researchers concluded was "statistically significant." DuPont abandoned the study rather than inform regulators or employees.

178. In a confidential November 1982 memo, DuPont's medical director warned about employees being exposed to potentially dangerous levels of PFOA. He recommended that all "available practical steps be taken to reduce this exposure."

179. By at least the early 1980s, DuPont began considering the effects of PFOA beyond its Washington Works plant. In 1984, DuPont sent employees to secretly fill jugs of water from gas stations and general stores around the plant. Testing of the water revealed PFOA in Lubeck, West Virginia and Little Hocking, Ohio. But, DuPont decided not to notify the public.

180. In 1984, DuPont held a meeting at its corporate headquarters in Wilmington, Delaware to discuss health and environmental issues related to PFOA. The corporate managers expressed concern about "C-8 exposures off plant as well as to our customers and the communities in which they operate." The corporate managers admitted internally that "none of the options developed are . . . economically attractive and would essentially put the long term viability of this business segment on the line." The DuPont corporate managers predicted that the medical and legal departments "will likely take a position of total elimination," of PFOA but instead decided that "corporate image, and corporate liability" would drive decisions about PFOA. And the corporate managers admitted that it was too late to address past liability: "Liability was further defined as the incremental liability from this point on if we do nothing as we are already liable for the past 32 years of operation." DuPont did not disclose the information discussed at the 1984 meeting to U.S. EPA, the State, or the general public. DuPont began manufacturing PFOA itself over 15 years later and continued to use PFOA for almost another 30 years.

181. By the mid-1980s, DuPont was aware that PFOA is biopersistent and bioaccumulative.

182. In an October 20, 1986 memorandum, a DuPont employee stated that DuPont's management in Wilmington, Delaware was "concerned about the possible liability resulting from long-term C-8 exposure to our employees and to the population in the surrounding communities and those down river from the [Washington Works] plant, since we don't know the ultimate effect of C8 on the human body and that the potential liability resulting from C-8 exposure is large."

183. In 1988, DuPont classified PFOA as a possible human carcinogen.

184. In 1999, DuPont received preliminary results from a monkey health study showing that C-8 caused monkeys to lose weight and increased their liver size. Even monkeys given the lowest doses suffered liver enlargement, and one was so ill it had to be euthanized.

185. An internal DuPont memorandum regarding its litigation strategy shows that DuPont sought to "not create [the] impression that DuPont did harm to the environment" and wanted to "keep [the] issue out of the press as much as possible."

186. In 2000, John R. Bowman, a DuPont in-house counsel for C-8 issues, wrote an email to several colleagues in which he urged: "I think we need to make more of an effort to get [DuPont] to look into what we can do to get the Lubeck community a clean source of water or filter the C-8 out of the water." Bowman continued:

> I think we are more vulnerable than the MTBE defendants [manufacturers of another notorious groundwater contaminant, MTBE] because many states have adopted a drinking water guideline for MTBE and it is not biopersistent. My gut tells me the biopersistence issue will kill us because of an overwhelming public attitude that anything biopersistent is harmful.
>
> We are going to spend millions to defend these lawsuits and have the additional threat of punitive damages hanging over our head. Getting out in front and acting responsibly can undercut and reduce the potential for punitives. [Bernard Reilly, another DuPont attorney] and I have been unsuccessful in even engaging the clients

> in any meaningful discussion of the subject. Our story is not a good one, we continued to increase our emissions into the [Ohio] river in spite of internal commitments to reduce or eliminate the release of this chemical into the community and the environment because of our concern about the biopersistence of this chemical.

187. In a 2001 e-mail, DuPont in-house lawyer Bernard Reilly described DuPont's response to the C-8 issue as "a debacle at best." Reflecting on a late 2001 meeting with EPA concerning PFAS contamination in Parkersburg, West Virginia, Reilly wrote of DuPont: "[T]he business did not want to deal with this issue in the 1990s, and now it is in their face, and some still are clueless. Very poor leadership, the worst I have seen in the face of a serious issue since I have been with DuPont."

188. Notwithstanding its internal knowledge of PFOA's health and environmental risks beginning as early as the 1950s, DuPont publicly stated in 2003 that "[w]e are confident that there are no health effects associated with C-8 exposure," and that "C-8 is not a human health issue."

189. DuPont's own Epidemiology Review Board (ERB) repeatedly raised concerns about DuPont's practice of stating publicly that there were no adverse health effects associated with human exposure to PFOA. In June 2005, DuPont reported to the press that "no human health effects are known to be caused by PFOA." An ERB member called that statement "[s]omewhere between misleading and disingenuous." In February 2006, the ERB "strongly advise[d] against any public statements asserting that PFOA does not pose any risk to health" and questioned "the evidential basis of DuPont's public expression asserting, with what appears to be great confidence, that PFOA does not pose a risk to health."

190. In October 2006, contrary to ERB's advice, DuPont's chief medical officer issued a false and misleading press release stating that "there are no health effects known to be caused by

PFOA." An ERB member criticized the press release because it "appear[ed] written to leave the impression 'don't worry.'"

191. By December 2005, EPA uncovered evidence that DuPont had concealed the environmental and health effects of C-8 for more than two decades. In response, EPA levied a $16.5 million administrative penalty on DuPont, which at that time was the largest civil administrative penalty EPA had ever obtained under any federal environmental statute.

192. At approximately the same time this penalty was issued, DuPont was making approximately $1 billion a year in revenue from products containing C-8.

D. Other Defendants Have also Known of the Dangers of PFAS-Containing AFFF.

193. Tyco, Chemguard, Buckeye, Kidde, and National Foam knew, or at the very least should have known, that in their intended and common use, their PFAS-containing AFFF products would harm the environment and human health.

194. Tyco, Chemguard, Buckeye, Kidde, and National Foam knew, or at the very least should have known, that through their intended and common use, their PFAS-containing AFFF products would injure the State's natural resources.

195. Information regarding PFAS compounds was readily accessible to Tyco, Chemguard, Buckeye, Kidde, and National Foam because each is an expert in the field of AFFF manufacturing and/or the materials needed to manufacture AFFF, and each has detailed information and understanding about the chemical compounds that form AFFF products.

196. The Firefighting Foam Coalition is an AFFF trade group that was formed in 2001 to advocate for AFFF's continued viability.

197. All of the Defendants, with the exception of 3M, were members of the FFFC, including DuPont, which as described above had extensive knowledge about the toxicity associated with PFAS (FFFC Defendants).

198. Through their involvement in the FFFC, as well as a variety of other trade associations and groups, FFFC Defendants shared knowledge and information regarding PFAS.

199. The FFFC Defendants worked together to protect AFFF from scrutiny.

200. Their close cooperation included messaging on PFOA's toxicological profile.

201. The FFFC's efforts were designed to shield its members and the AFFF industry from the detrimental impact of the public and regulators learning about PFOA's harms to human health and the environment.

202. FFFC Defendants regularly published newsletters and attended conferences promoting their AFFF products as appropriate for widespread use.

203. These coordinated efforts by the FFFC Defendants were meant to dispel concerns about the impact AFFF had on the environment and human health. They worked in concert to conceal known risks of their AFFF from the government and public.

204. FFFC Defendants repeated the same message for years: Only one PFAS chemical, PFOS, had been taken off the market. Since the FFFC Defendants' products did not contain PFOS, they claimed their products were safe.

205. FFFC Defendants knew the use of their AFFF products presented a similar threat to human health and the environment, yet they continued to promote their AFFF products and claim they were safe.

206. While this was known to FFFC Defendants, it was not fully understood by the users of AFFF, the public, and regulators, including the State.

E. Defendants Failed to Act on Their Knowledge of the Health and Environmental Risks of PFAS and PFAS-Containing AFFF.

207. Despite their knowledge that PFAS posed environmental and human health risks, and despite the availability of reasonable alternatives, Defendants failed to warn customers, users, the public or the State, and failed to take any other appropriate precautionary measures to prevent or mitigate such contamination. Instead, Defendants promoted AFFF-containing PFAS and PFAS for use in AFFF as environmentally sound products appropriate for widespread use.

208. At all times relevant to this litigation, Defendants were or should have been aware that AFFF-related PFAS contamination of State natural resources and property was inevitable. This was due to PFAS's solubility, recalcitrance to biodegradation and bioremediation, and the normal and foreseen use of PFAS-containing AFFF, including in Vermont.

209. Defendants possess and have always possessed superior knowledge, resources, experience, and other advantages, in comparison to anyone or any agency, concerning the manufacture, distribution, nature, and properties of PFAS used in AFFF and PFAS-containing AFFF.

210. By virtue of their economic power and analytical resources, including the employment of scientists such as chemists, engineers, and toxicologists, Defendants have at all relevant times been in a position to know, identify, and confirm the threat PFAS posed and poses to State natural resources and property.

211. In addition, by virtue of this superior knowledge, and/or by virtue of Defendants' misleading statements regarding the nature and impacts of AFFF-related PFAS, Defendants had a duty to disclose the truth and to act in accordance with the truth about PFAS and PFAS-containing AFFF.

VIII. HISTORICAL DUPONT'S SPINOFF OF THE CHEMOURS COMPANY

212. In February 2014, Historical DuPont (*i.e.*, E.I. du Pont de Nemours and Company) formed The Chemours Company as a wholly-owned subsidiary.

213. As a wholly-owned subsidiary, The Chemours Company had a separate board of directors, but that board was controlled by Historical DuPont employees.

214. In July 2015, Historical DuPont transferred to The Chemours Company its "performance chemicals" business line, including titanium technologies, fluoroproducts, and chemical solutions.

215. In addition to the transfer of assets, The Chemours Company accepted broad assumption of many liabilities for Historical DuPont's historical use, manufacture, and discharge of PFAS, although the specific details regarding the liabilities that The Chemours Company assumed are set forth in the non-public schedules.

216. The transfer to The Chemours Company of Historical DuPont's performance chemicals business line, which was loaded with failing products and substantial debts, as well as environmental liabilities from Historical DuPont, which were known by Historical DuPont to be significant, resulted in a transfer in which Chemours did not receive a reasonably equivalent value in exchange for the transfer or obligation. Further, the assets transferred to The Chemours Company were unreasonably small in relation to the business or transaction. Historical DuPont believed or reasonably should have believed that The Chemours Company would incur debts beyond its ability to pay them as they became due.

217. At the time of those transfers, the performance chemicals business line carried an estimated debt of approximately $4 billion.

218. Historical DuPont had also promised to phase out production and use of PFOA, a major component of its fluoroproducts line, by 2015.

219. Under the Separation Agreement, The Chemours Company agreed to indemnify Historical DuPont against, and assumed for itself, all "Chemours Liabilities," which is defined broadly to include, among other things, "any and all liabilities relating," "primarily to, arising primarily out of or resulting primarily from, the operation of or conduct of the [Performance Chemicals] Business at any time." This indemnification is uncapped and does not have a survival period.

220. The Chemours Company agreed to indemnify Historical DuPont against and assume for itself the Performance Chemical Business's liabilities regardless of: (i) when or where such liabilities arose; (ii) whether the facts upon which they are based occurred prior to, on, or subsequent to the effective date of the spinoff; (iii) where or against whom such liabilities are asserted or determined; (iv) whether arising from or alleged to arise from negligence, gross negligence, recklessness, violation of law, fraud or misrepresentation by any member of the Historical DuPont group or the Chemours group; and (v) which entity is named in any action associated with any liability.

221. The Chemours Company agreed to indemnify Historical DuPont from, and assume all, environmental liabilities that arose prior to the spinoff if they were "primarily associated" with the Performance Chemicals Business. Such liabilities were deemed "primarily associated" if Historical DuPont reasonably determined that 50.1% of the liabilities were attributable to the Performance Chemicals Business.

222. The Chemours Company also agreed to use its best efforts to be fully substituted for Historical DuPont with respect to "any order, decree, judgment, agreement or Action with respect to Chemours Assumed Environmental Liabilities . . . ."

223. At the time of the July 2015 spin-off, Historical DuPont was well aware of its potential liabilities related to PFAS contamination throughout the United States.

224. Until the spinoff was complete, The Chemours Company was a wholly-owned subsidiary of Historical DuPont. Although The Chemours Company had a separate board, the board was controlled by Historical DuPont employees.

225. Once the spinoff was complete, seven new members of The Chemours Company board were appointed, for an eight member board of directors of the new public company. The negotiations concerning the spinoff were conducted and the related decisions were made while the board was still controlled by Historical DuPont.

226. The new independent board appointed upon the completion of the spinoff did not take part in the negotiations of the terms of the separation.

227. In 2005, Historical DuPont agreed to pay $16.5 million to resolve eight counts brought by the EPA alleging violations of the Toxic Substances Control Act and the Resource Conservation and Recovery Act concerning the toxicity of PFAS compounds. At the time, it was the largest such penalty in history.

228. Also in 2005, Historical DuPont settled a class action lawsuit filed on behalf of 70,000 residents of Ohio and West Virginia for $343 million. Under the terms of the 2005 class action settlement, Historical DuPont agreed to fund a panel of scientists to determine if any diseases were linked to PFOA exposure, to filter local water for as long as C-8 concentrations exceeded

regulatory thresholds, and to set aside $235 million for ongoing medical monitoring of the affected community.

229. After 8 years, the C-8 Science Panel found several significant diseases, including cancer, linked to PFOA.

230. Thereafter, more than 3,500 personal injury claims were filed in Ohio and West Virginia as part of the 2005 settlement that were consolidated into a multidistrict litigation court in Ohio (the "Ohio MDL").

231. As The Chemours Company explained in its November 2016 SEC filing: "[s]ignificant unfavorable outcomes in a number of cases in the [Ohio] MDL could have a material adverse effect on Chemours consolidated financial position, results of operations or liquidity."

232. Juries in three bellwether trials returned multi-million dollar verdicts against Historical DuPont, awarding compensatory damages and, in two cases, punitive damages to plaintiffs who claimed PFOA exposure caused their illnesses.

233. On February 13, 2017, Historical DuPont and The Chemours Company agreed to pay $671 million to resolve the Ohio MDL.

234. The Chemours Company also agreed to pay $25 million for future PFOA costs not covered by the settlement for each of the next five years (up to an additional $125 million).

235. Historical DuPont also agreed to cover additional amounts up to $25 million for five years.

236. At the time of the transfer of its Performance Chemicals Business to The Chemours Company, Historical DuPont had been sued, threatened with suit and/or had knowledge of the likelihood of litigation to be filed regarding Historical DuPont's liability for damages and injuries from the manufacture of PFAS and products that contain PFAS.

237. In addition to liabilities associated with PFAS contamination, Historical DuPont's environmental liabilities assumed by The Chemours Company included litigation over benzene, a carcinogen released from some of Historical DuPont's plants.

238. In December 2015, a Texas jury awarded $8.4 million to a painter who developed leukemia after using paints with benzene for years, and at least 27 more benzene cases were pending as of September 30, 2016.

239. The Chemours Company also assumed the obligation to clean-up Pompton Lakes, New Jersey, where Historical DuPont manufactured explosives from 1902 to 1994, and where lead salts, mercury, volatile organic compounds, explosive powders, chlorinated solvents, and detonated blasting caps still contaminate groundwater and soil. The Chemours Company's SEC filings estimate that the remediation, which began in 1985, may cost as much as $119 million to complete.

240. The effect of creating The Chemours Company was to segregate a large portion of Historical DuPont's environmental liabilities, including liabilities related to its PFAS chemicals and products.

241. The consolidation of Historical DuPont's performance chemical liabilities has potentially limited the availability of funds arising out of Historical DuPont's liability.

IX. STATE NATURAL RESOURCES AND PROPERTY INJURIES

242. AFFF-related PFOS, PFOA, PFNA, PFHxS, and PFHpA compounds have been found in and around State natural resources and property, including groundwater, surface waters, and soil.

243. DEC investigations revealed AFFF-related PFAS contamination and injury associated with a number of known sites in Vermont, including but not limited to the following:

a. Air National Guard facility, South Burlington;

b. Camp Ethan Allen Training Site, Jericho/Underhill;

c. Vermont Fire Training Academy, Pittsford; and

d. Southern Vermont Airport, Clarendon.

244. PFAS, including PFOS, PFHxS, and PFOA, were detected in a water supply well at the Air National Guard site at concentrations above groundwater standards in a groundwater recovery trench and in a private well used primarily for agricultural purposes.

245. Waters sampled from a groundwater collection system at the Air National Guard site showed PFOA concentration of 9,300 ppt, which is 465 times the State's health advisory level, and PFOS concentration of 38,000 ppt, 1,900 times the State's health advisory level. Additional site investigation is occurring at the site.

246. An agriculture well at Belter Farm located north of the Air National Guard site also tested positive for PFOA. Milk from cows at the Farm was found to contain PFAS. In response, DEC installed a water treatment system on the agriculture well to remove PFAS contamination at a large cost to the State.

247. PFAS was detected above Vermont's standards in a water supply well at the Camp Ethan Allen Training Site. One onsite water supply well had PFOA at 30.8 ppt. At this time, this water supply well is not being used for drinking.

248. PFAS was found in an onsite training water recycling underground tank at the Vermont Fire Training Academy. PFOS and PFOA were detected at a combined level of 80 ppt in water and 220 ppb in tank-bottom sludge. The Fire Training Academy used PFAS-containing AFFF from the 1970s until 2011 during training exercises.

249. At the Southern Vermont Airport in Clarendon, PFAS have been detected near current and former firefighting training areas where AFFF has been used.

250. PFAS have also been found at the Airport's fire station where firetrucks were washed after training exercises and where AFFF pumper trucks are stored.

251. PFAS is also suspected to be present at a stormwater/surface water discharge location at the southeastern corner of the Airport, and at the location of an August 6, 1986 crash of a Learjet and resulting fire. The plane was carrying 1,000 pounds of aviation fuel when it crashed. A fire broke out that was extinguished using AFFF. According to fire officials, the plane was covered in AFFF throughout the salvage operation as well. Additional plane crashes occurred at the Airport and AFFF was applied as a precautionary measure. Additional investigations are ongoing at these locations.

252. Of the 75 bedrock wells sampled at the Southern Vermont Airport to date, PFAS has been detected in 24 of them. The highest level of PFAS detected so far was 2,666 ppt, which is more than 133 times Vermont's health advisory limit of 20 ppt.

253. The furthest wells with detections are 1.5 miles southwest of the Airport. The extent of PFAS contamination has not been fully defined.

254. There are more than 83 private wells and 5 public wells within ¼ of a mile of the Airport, as well as 2 source protection areas located on Airport property. A source protection area is an area of land that likely recharges or passes groundwater through it to a public water source. The Airport's AFFF test area is located within one of those source protection areas. Within one mile of the Airport, there are approximately 253 private wells, 9 public wells, and 3 source protection areas.

255. Two springs sampled at the Airport have detected PFAS greater than the Vermont advisory levels.

256. PFAS concentrations were also detected in soil at the Airport.

257. In March 2018, PFAS contamination was discovered in the Airport business park treatment system. The affected wells serve hundreds of people at nearby businesses. In response, DEC installed water treatment systems on the public drinking water system and on the private wells at a large cost to the State.

258. The DEC continues to investigate other potential sources of PFAS, including AFFF fire-fighting foam locations, to ensure protection of the public health and the environment.

259. Additional site investigation is planned for these sites, as well as others where AFFF-related PFAS contamination is suspected to be found.

260. As the State continues its investigation, it is likely that it will discover other sites that will require remediation and restoration due to contamination with PFAS from AFFF. The State likely will also discover that additional natural resources have been damaged due to such contamination.

261. AFFF-related PFAS contamination has injured State natural resources and/or adversely impacted their beneficial public trust uses including those for drinking water, recreation, and fishing.

262. AFFF-related PFAS contamination and injury has substantially damaged the intrinsic value of these State natural resources.

263. Vermont and its citizens have been deprived of the full use, enjoyment, and benefit of the State's public trust resources, and the intrinsic values of such State natural resources have been substantially harmed by PFOS, PFOA, PFNA, PFHxS, and PFHpA found within AFFF.

264. The State's natural resources and property have been contaminated and injured by PFOS, PFOA, PFNA, PFHxS, and PFHpA found within AFFF through foreseeable releases from the use of AFFF.

265. Defendants' acts or omissions have caused and/or contributed to these AFFF-related PFAS releases.

266. Defendants failed to disclose the environmental and health risks of PFAS that were known or should have been known to them, to the owners or operators of sites from which PFAS-containing AFFF was used, resulting in the release of PFOS, PFOA, PFNA, PFHxS, and/or PFHpA. As a result, the risks associated with PFAS were generally unknown to the users of AFFF containing PFOS, PFOA, PFNA, PFHxS, and/or PFHpA; were unknown to the State; and were generally unknown to those other than Defendants who could have reduced or limited the AFFF-related PFAS contamination and injury described above. As manufacturers, marketers, and sellers of PFAS-containing AFFF and/or PFAS, Defendants were in the best position to reduce the risk of harm of their products.

267. Each of the State's natural resources is precious, limited, and invaluable, as described in more detail below.

A. Groundwater

268. Groundwater is a precious, limited, and invaluable State natural resource that is used for drinking water, irrigation, and other important purposes.

269. Over 60% of Vermonters rely upon groundwater as a source for their drinking water.

270. State natural resources, including groundwater, are vital to the health, safety, and welfare of Vermont citizens, and to the State's economy and ecology.

271. PFOS, PFOA, PFNA, PFHxS, and/or PFHpA found within Defendants' AFFF products and/or manufactured by Defendants for use in AFFF have contaminated groundwater in the State, including, for example, at the following locations:

a. Air National Guard facility, South Burlington;

b. Camp Ethan Allen Training Site, Jericho/Underhill;

c. Vermont Fire Training Academy, Pittsford; and

d. Southern Vermont Airport, Clarendon.

272. PFOS, PFOA, PFNA, PFHxS, and/or PFHpA found within Defendants' AFFF products and/or manufactured by Defendants for use in AFFF have contaminated drinking water that is drawn from groundwater sources in the State, including, for example, at the following locations:

a. Vermont Fire Training Academy, Pittsford; and

b. Southern Vermont Airport, Clarendon.

273. Ongoing additional testing continues to reveal further AFFF-related PFAS contamination and injury of groundwater in Vermont.

274. It is virtually certain that additional testing will reveal further AFFF-related PFAS contamination and injury of groundwater and drinking water in Vermont.

B. Surface Waters

275. Surface waters are precious, limited, and invaluable State natural resources that are used for drinking water, irrigation, recreation such as swimming and fishing, and ecological and other important purposes.

276. Over 30% of Vermonters rely upon surface waters as sources for drinking water.

277. The State's tourism and recreation industries are dependent upon clean water, including surface waters.

278. Surface waters also are commercially, recreationally, aesthetically, and ecologically important to the State and its citizens, including by supporting aquatic ecosystems, and biota such as fish.

279. PFOS, PFOA, PFNA, PFHxS, and/or PFHpA found within Defendants' AFFF products and/or manufactured by Defendants for use in AFFF have contaminated surface waters in the State, including, the Air National Guard facility, South Burlington, and the Southern Vermont Airport, Clarendon.

280. Ongoing additional testing continues to reveal further AFFF-related PFAS contamination and injury of surface waters in Vermont.

281. It is virtually certain that additional testing will reveal further AFFF-related PFAS contamination and injury of surface water in locations throughout Vermont.

C. Wildlife, Soils, and Sediments

282. Wildlife is a precious, limited, and invaluable State natural resource.

283. Soils and sediments are part of or interconnected with the health of State natural resources such as surface waters, groundwater, and wildlife, and provide numerous values and services. For instance, sediments are important as habitat for wildlife including fish, among other important ecological uses; and soils may contain contaminants that migrate to groundwater. A healthy and functioning ecosystem depends upon the interplay between non-impaired soils, sediments, and wildlife.

284. PFOS, PFOA, PFNA, PFHxS, and/or PFHpA found within Defendants' AFFF products and/or manufactured by Defendants for use in AFFF have contaminated soils and sediments in the State, including, for example, the Southern Vermont Airport, Clarendon.

285. Wildlife are critical ecological resources.

286. PFOS, PFOA, PFNA, PFHxS, and/or PFHpA found within Defendants' AFFF products and/or manufactured by Defendants for use in AFFF have contaminated wildlife.

287. Vermont's biodiversity is vital to its ecology, economy, and culture.

288. Vermont's fish, and other wildlife are used for food, recreational purposes, and provide a significant economic benefit to the State, including through tourism and recreation.

289. Injuries to wildlife affect not only individual wildlife, but the entire ecosystem of which they are part.

290. Ongoing additional testing continues to reveal further AFFF-related PFAS contamination and injury of soils and sediments in Vermont.

291. It is virtually certain that additional testing will reveal AFFF-related PFAS contamination and injury of wildlife, soils, and sediments in locations throughout Vermont.

D. New AFFF-related PFAS Contamination Continues to be Discovered and Existing Contamination Continues to Injure State Natural Resources and Property.

292. AFFF-related PFAS has contaminated State natural resources and property throughout the State. This contamination has injured these resources, threatens State citizens' health, safety, and welfare, and interferes with the use of these precious resources.

293. Given PFAS's properties, including their resistance to biodegradation and their solubility, AFFF-related PFAS continues to move through groundwater, surface waters, and soils, and other natural resources, and cause initial contamination in new locations, adversely impacting State natural resources and property.

294. AFFF-related PFAS continues to move through the environment and contaminate State natural resources and property at a number of locations throughout the State with known PFAS contamination.

295. Defendants' acts and omissions directly and proximately caused and continue to cause AFFF-related PFAS to intrude into and contaminate these natural resources and property.

296. There are proven and preliminary remedial techniques for cleaning up AFFF-related PFAS in environmental media.

297. Absent use of the remediation and treatment methods, AFFF-related PFAS contamination will continue to spread through the State's natural resources and property. Although PFAS is persistent in the environment, AFFF-related PFAS can be successfully remediated in certain natural resources and/or successfully treated, but at significant expense.

298. AFFF-related PFAS contamination levels in State natural resources including groundwater and drinking water typically fluctuate, *i.e.,* increase and decrease, over time as PFAS moves through groundwater and due to other factors, including changes in seasonal precipitation levels. PFAS levels can fluctuate at a single PFAS contamination site over time. For this reason, the only way to be certain that AFFF-related PFAS no longer exists in State natural resources such as groundwater or drinking water is to remediate and treat the PFAS.

299. AFFF-related PFAS's presence and migration in Vermont's natural resources and property, absent large-scale and costly remediation, will continue indefinitely, and will continue to indefinitely threaten such natural resources and property.

X. FIRST CAUSE OF ACTION

Civil Action for Natural Resource Damages and Restoration
(All Defendants)

300. The State realleges and reaffirms each and every allegation set forth in all preceding paragraphs as if fully restated in this section.

301. Surface waters, groundwater, and wildlife are public trust resources in Vermont.

302. The State in its role as trustee must manage its public trust resources for the benefit of its citizens.

303. The State, as trustee, may bring a cause of action to recover damages to and restoration of natural resources held in trust by the State.

304. The State also may act in its *parens patriae* capacity to protect and restore the State's natural resources.

305. Defendants have unreasonably interfered with the use and enjoyment of public trust rights, and have injured the natural resources of the State of Vermont through the acts and omissions alleged in this Complaint.

306. As a direct and proximate result of Defendants' acts and omissions as alleged in this Complaint, AFFF-related PFAS have injured the State's natural resources by causing contamination and injury of groundwater, drinking water supplies, public drinking water supply wells, private drinking water wells, surface waters, fish, and other natural resources of the State.

307. As a further direct and proximate result of the acts and omissions of Defendants, the State has sustained and will sustain substantial expenses and damages, for which Defendants are strictly, jointly, and severally liable.

308. Defendants' acts and omissions have caused and/or threatened to cause injuries to the State's natural resources that are indivisible.

XI. SECOND CAUSE OF ACTION

Groundwater Protection Act, 10 V.S.A. § 1410
(All Defendants)

309. The State realleges and reaffirms each and every allegation set forth in all preceding paragraphs as if fully restated in this section.

310. The State of Vermont is a "person" as defined by 10 V.S.A. § 1410(b)(3).

311. Defendants have altered the character and/or quality of the groundwater in the State by engaging in the acts and omissions alleged in this Complaint. For example, as discussed above, PFAS is associated with significant harmful health effects in humans and animals, including at low concentrations.

312. Defendants' alteration of the groundwater caused unreasonable harm by contaminating groundwater, drinking water supplies, public drinking water supply wells, private drinking water wells, public property, and/or other waters and property of the State.

313. AFFF-related PFAS has profoundly and unreasonably affected the waters of the State, compromising their use for household purposes including drinking, cooking, and bathing, and risking public health via exposure to PFAS. AFFF-related PFAS contamination poses an extraordinary and unjust financial burden on the State and its citizens, who bear the costs of testing, monitoring, and remediation although Defendants profited from the manufacturing, marketing, distribution, and/or sale of PFAS-containing AFFF and/or PFAS for use in AFFF.

314. The Act authorizes the State to seek equitable relief and/or damages for the unreasonable harm caused by AFFF-related PFAS contamination.

315. As a direct and proximate result of Defendants' acts and omissions, the State's waters and property were and are contaminated with AFFF-related PFAS. The State has incurred, is incurring, and will incur, investigation, remediation, cleanup, restoration, removal, treatment and monitoring costs and expenses related to contamination and injury of the State's groundwater, including drinking water, for which Defendants are strictly, jointly, and severally liable.

316. As a further direct and proximate result of Defendants' acts and omissions, the State has sustained and will sustain other substantial expenses and damages, for which Defendants are strictly, jointly, and severally liable.

317. Defendants' acts and omissions have caused and/or threatened to cause injuries to the State's waters and property that are indivisible.

XII. THIRD CAUSE OF ACTION

Strict Liability for Design Defect and/or Defective Product
(All Defendants)

318. The State realleges and reaffirms each and every allegation set forth in all preceding paragraphs as if fully restated in this section.

319. Defendants during the relevant time period were designers, manufacturers, marketers, distributors, and/or sellers of AFFF containing PFOS, PFOA, PFNA, PFHxS, and/or PFHpA PFOS, PFOA, PFNA, PFHxS, and/or PFHpA for use in AFFF.

320. As designers, manufacturers, marketers, distributors, and/or sellers of AFFF containing PFOS, PFOA, PFNA, PFHxS, and/or PFHpA PFOS, PFOA, PFNA, PFHxS, and/or PFHpA for use in AFFF, Defendants owed a duty to all persons whom Defendants' AFFF-related PFOS, PFOA, PFNA, PFHxS, and/or PFHpA might foreseeably harm, including the State and its citizens, not to market any product which is unreasonably dangerous for its intended and foreseeable uses.

321. Defendants represented, asserted, claimed, and warranted that AFFF-related PFOS, PFOA, PFNA, PFHxS, and/or PFHpA were safe for their intended and foreseeable uses.

322. When Defendants placed AFFF-related PFOS, PFOA, PFNA, PFHxS, and/or PFHpA into the stream of commerce, they were defective, unreasonably dangerous, and not reasonably suited for their intended, foreseeable and ordinary storage, handling, and uses, including for the following reasons:

a. Unintended releases of AFFF products containing PFOS, PFOA, PFNA, PFHxS, and/or PFHpA are commonplace;

b. PFOS, PFOA, PFNA, PFHxS, and/or PFHpA are released to the environment through the normal and foreseen use of AFFF products containing PFOS, PFOA, PFNA, PFHxS, and/or PFHpA;

c. When PFOS, PFOA, PFNA, PFHxS, and/or PFHpA are released into the environment through the intentional use of or accidental spilling of PFAS-containing AFFF, PFOS, PFOA, PFNA, PFHxS, and/or PFHpA have a tendency to mix with groundwater and migrate great distances;

d. When PFOS, PFOA, PFNA, PFHxS, and/or PFHpA are released into the environment through the intentional use of or accidental spilling of PFAS-containing AFFF, PFOS, PFOA, PFNA, PFHxS, and/or PFHpA persist over long periods of time because PFOS, PFOA, PFNA, PFHxS, and/or PFHpA are recalcitrant to biodegradation and bioremediation;

e. PFOS, PFOA, PFNA, PFHxS, and/or PFHpA found within AFFF products bioaccumulate in humans and wildlife;

f. Very low concentrations of PFOS, PFOA, PFNA, PFHxS, and/or PFHpA found with AFFF products can make water unpotable;

g. PFOS, PFOA, PFNA, PFHxS, and/or PFHpA found within AFFF products pose risks to human health;

h. Defendants with knowledge of the risks failed to use reasonable care in the design of PFOS, PFOA, PFNA, PFHxS, and/or PFHpA to be used in AFFF and/or AFFF containing PFOS, PFOA, PFNA, PFHxS, and/or PFHpA;

i. PFOS, PFOA, PFNA, PFHxS, and/or PFHpA found within AFFF pose greater dangers to State natural resources and property than would be expected by ordinary persons such as the State, users and the general public exercising reasonable care;

j. The risks which PFOS, PFOA, PFNA, PFHxS, and/or PFHpA found within AFFF pose to State natural resources and property outweigh their utility in firefighting activities and training exercises; and

k. Safer alternatives to PFOS, PFOA, PFNA, PFHxS, and/or PFHpA found within AFFF and/or AFFF products containing PFOS, PFOA, PFNA, PFHxS, and/or PFHpA have existed and been available to Defendants at all times relevant to this litigation.

323. The above-described defects exceeded the knowledge of the ordinary person and by the exercise of reasonable care the State would not be able to avoid the harm caused by PFOS, PFOA, PFNA, PFHxS, and/or PFHpA found within AFFF.

324. AFFF containing PFOS, PFOA, PFNA, PFHxS, and/or PFHpA PFOS, PFOA, PFNA, PFHxS, and/or PFHpA for use in AFFF were distributed and sold in the manner intended or

reasonably foreseen by the Defendants, or as should have been reasonably foreseen by Defendants.

325. AFFF containing PFOS, PFOA, PFNA, PFHxS, and/or PFHpA PFOS, PFOA, PFNA, PFHxS, and/or PFHpA for use in AFFF reached consumers and the environment in a condition substantially unchanged from that in which they left Defendants' control.

326. AFFF containing PFOS, PFOA, PFNA, PFHxS, and/or PFHpA PFOS, PFOA, PFNA, PFHxS, and/or PFHpA for use in AFFF failed to perform as safely as an ordinary consumer would expect when used in their intended and reasonably foreseeable manner.

327. As a direct and proximate result of Defendants' acts and omissions, the State's natural resources and property are contaminated with AFFF-related PFOS, PFOA, PFNA, PFHxS, and/or PFHpA. The State has incurred, is incurring, and will incur, investigation, remediation, cleanup, restoration, removal, treatment, and monitoring, and other costs and expenses related to AFFF-related PFOS, PFOA, PFNA, PFHxS, and/or PFHpA contamination and injury of State natural resources and property, for which Defendants are strictly, jointly, and severally liable.

328. As a further direct and proximate result of the acts and omissions of Defendants, the State has sustained and will sustain other substantial expenses and damages, including damages for loss of use and enjoyment, for which Defendants are strictly, jointly, and severally liable.

329. Defendants' acts and omissions have caused and/or threatened to cause injuries to the State's natural resources and property that are indivisible.

XIII. FOURTH CAUSE OF ACTION

Strict Liability for Failure to Warn (All Defendants)

330. The State realleges and reaffirms each and every allegation set forth in all preceding paragraphs as if fully restated in this section.

331. As manufacturers, marketers, distributors, promoters and/or sellers of AFFF containing PFAS and/or PFAS for use in AFFF, Defendants had a duty to issue warnings to the State, the public, public officials, consumers, and users of the risks posed by PFOS, PFOA, PFNA, PFHxS, and/or PFHpA.

332. Defendants knew that AFFF containing PFAS and/or PFAS for use in AFFF would be purchased, transported, stored, handled, used, and disposed of without notice of the hazards which PFAS, including PFOS, PFOA, PFNA, PFHxS, and/or PFHpA, pose to State natural resources and property.

333. Defendants' failure to warn of these hazards made AFFF containing PFAS and/or PFAS for use in AFFF unreasonably dangerous.

334. At all times relevant to this litigation, Defendants have had actual and/or constructive knowledge of facts, including the following, which rendered AFFF containing PFAS and/or PFAS for use in AFFF hazardous to State natural resources and property:

a. Unintended releases of AFFF products containing PFOS, PFOA, PFNA, PFHxS, and/or PFHpA are commonplace;

b. PFOS, PFOA, PFNA, PFHxS, and/or PFHpA are released to the environment through the normal and foreseen use of AFFF products containing PFOS, PFOA, PFNA, PFHxS, and/or PFHpA;

c. When PFOS, PFOA, PFNA, PFHxS, and/or PFHpA are released into the environment through the intentional use of or accidental spilling of PFAS-containing AFFF, PFOS, PFOA, PFNA, PFHxS, and/or PFHpA have a tendency to mix with groundwater and migrate great distances;

d. When PFOS, PFOA, PFNA, PFHxS, and/or PFHpA are released into the environment through the intentional use of or accidental spilling of PFAS-containing AFFF, PFOS, PFOA, PFNA, PFHxS, and/or PFHpA persist over long periods of time because PFOS, PFOA, PFNA, PFHxS, and/or PFHpA are recalcitrant to biodegradation and bioremediation;

e. PFOS, PFOA, PFNA, PFHxS, and/or PFHpA found within AFFF products bioaccumulate in humans and wildlife;

f. Very low concentrations of PFOS, PFOA, PFNA, PFHxS, and/or PFHpA found with AFFF products can make water unpotable;

g. PFOS, PFOA, PFNA, PFHxS, and/or PFHpA found within AFFF products pose risks to human health; and

h. PFAS found within AFFF are associated with certain cancers in humans.

335. The foregoing facts relating to the hazards that AFFF containing PFAS and/or PFAS for use in AFFF pose to State natural resources and property are not the sort of facts that, at the relevant times, the State, users, consumers, or the general public could ordinarily discover or protect themselves against absent sufficient warnings.

336. Defendants breached their duty to warn by unreasonably failing to provide warnings concerning any of the facts alleged here to the State, public officials, users, consumers, and/or the general public.

337. Defendants' failure to warn proximately caused reasonably foreseeable injuries to the State. The State and others would have heeded legally adequate warnings, and AFFF containing PFAS and/or PFAS for use in AFFF would not have gained approval in the marketplace, and AFFF containing PFAS and/or PFAS for use in AFFF would have been treated differently in terms of procedures for firefighting training and extinguishment activities.

338. As a direct and proximate result of Defendants' acts and omissions, the State's natural resources and property are contaminated with AFFF-related PFAS, including PFOS, PFOA, PFNA, PFHxS, and/or PFHpA. The State has incurred, is incurring, and will incur, investigation, remediation, cleanup, restoration, removal, treatment, monitoring and other costs and expenses related to contamination and injury of the State's natural resources and property, for which Defendants are strictly, jointly, and severally liable.

339. As a further direct and proximate result of the acts and omissions of Defendants, the State has sustained and will sustain other substantial expenses and damages, including damages for loss of use and enjoyment, for which Defendants are strictly, jointly, and severally liable.

340. Defendants' acts and omissions have caused and/or threatened to cause injuries to the State's natural resources and property that are indivisible.

XIV. FIFTH CAUSE OF ACTION

Negligence
(All Defendants)

341. The State realleges and reaffirms each and every allegation set forth in all preceding paragraphs as if fully restated in this section.

342. As manufacturers, marketers, distributors, promoters, and/or sellers of AFFF containing PFAS and/or PFAS for use in AFFF, Defendants owed a duty to the State as well as to all persons whom Defendants' AFFF-related PFAS products might foreseeably harm to exercise due care in the design, manufacturing, promotion, marketing, sale, distribution, testing, labeling, use, warning, and instructing for use of AFFF containing PFAS and/or PFAS for use in AFFF.

343. Defendants had a duty and the financial and technical means to test AFFF containing PFAS and/or PFAS for use in AFFF, and to warn public officials, consumers, users, and the general public of the hazardous characteristics of PFAS.

344. Defendants had a duty to not contaminate the environment.

345. Defendants had a duty to not contaminate State natural resources.

346. Defendants represented and claimed that AFFF containing PFAS and/or PFAS for use in AFFF did not require any different or special handling or precautions. Any warnings Defendants did provide were generic and did not suffice to warn reasonable users of the dangers to the environment posed by these AFFF products and/or chemicals found within such products.

347. At times relevant to this litigation, Defendants knew or should have known of the following environmental and health risks, among others:

a. Unintended releases of AFFF products containing PFAS, including PFOS, PFOA, PFNA, PFHxS, and/or PFHpA, are commonplace;

b. PFOS, PFOA, PFNA, PFHxS, and/or PFHpA are released to the environment through the normal and foreseen use of AFFF products containing PFOS, PFOA, PFNA, PFHxS, and/or PFHpA;

c. When PFOS, PFOA, PFNA, PFHxS, and/or PFHpA are released into the environment through the intentional use of or accidental spilling of PFAS-containing AFFF, PFOS, PFOA, PFNA, PFHxS, and/or PFHpA have a tendency to mix with groundwater and migrate great distances;

d. When PFOS, PFOA, PFNA, PFHxS, and/or PFHpA are released into the environment through the intentional use of or accidental spilling of PFAS-containing AFFF, PFOS, PFOA, PFNA, PFHxS, and/or PFHpA persist over long periods of time because PFOS, PFOA, PFNA, PFHxS, and/or PFHpA are recalcitrant to biodegradation and bioremediation;

e. PFOS, PFOA, PFNA, PFHxS, and/or PFHpA found within AFFF products bioaccumulate in humans and wildlife;

f. Very low concentrations of PFOS, PFOA, PFNA, PFHxS, and/or PFHpA found with AFFF products can make water unpotable;

g. PFOS, PFOA, PFNA, PFHxS, and/or PFHpA found within AFFF products pose risks to human health; and

h. PFAS found within AFFF are associated with certain cancers in humans.

348. The foregoing facts relating to the hazards which AFFF-related PFAS, including PFOS, PFOA, PFNA, PFHxS, and/or PFHpA, pose to State natural resources and property, are not the sort of facts which the State, users, consumers, and the general public could ordinarily discover or protect themselves against absent sufficient warnings.

349. AFFF containing PFAS and/or PFAS for use in AFFF manufactured, marketed, distributed, promoted and/or sold by Defendants were used in a normal and foreseeable manner.

350. Defendants have negligently breached their duties of due care to the State, consumers, users, and the general public by, among other things:

a. Promoting and defending AFFF containing PFAS and/or PFAS, including PFOS, PFOA, PFNA, PFHxS, and/or PFHpA, to be used in AFFF and/or while concealing the threat PFOS, PFOA, PFNA, PFHxS, and/or PFHpA pose to natural resources and property;

b. marketing, touting, and otherwise promoting the benefits of AFFF containing PFAS and/or PFAS, including PFOS, PFOA, PFNA, PFHx,S and/or PFHpA, to be used in AFFF without disclosing the truth about the environmental and potential health hazards posed by PFOS, PFOA, PFNA, PFHxS, and/or PFHpA;

c. failing to eliminate or minimize the harmful impacts and risks posed by AFFF containing PFAS and/or PFAS, including PFOS, PFOA, PFNA, PFHxS, and/or PFHpA, to be used in AFFF;

d. failing to curtail or reduce the distribution of AFFF containing PFAS and/or PFAS, including PFOS, PFOA, PFNA, PFHxS, and/or PFHpA, to be used in AFFF;

e. failing to instruct the State, consumers, users and the general public about the safe handling and use of AFFF containing PFAS and/or PFAS, including PFOS, PFOA, PFNA, PFHxS, and/or PFHpA, to be used in AFFF; and/or

f. failing to warn and instruct the State, consumers, users and the general public about the risks to natural resources posed by AFFF containing PFAS and/or PFAS, including PFOS, PFOA, PFNA, PFHxS, and/or PFHpA, to be used in AFFF, about the necessary precautions and steps to prevent or minimize releases of AFFF-related PFOS, PFOA, PFNA, PFHxS, and/or PFHpA in distribution, storage, use and disposal, and about how to remediate such releases promptly.

351. As a direct and proximate result of Defendants' acts and omissions, the State's natural resources and property are contaminated with AFFF-related PFAS. The State has incurred, is incurring, and will incur, investigation, remediation, cleanup, restoration, removal, treatment, monitoring and other costs and expenses related to contamination and injury of the State's natural resources and property, for which Defendants are jointly and severally liable.

352. As a further direct and proximate result of the acts and omissions of the Defendants, the State has sustained and will sustain other substantial expenses and damages, including damages for loss of use and enjoyment, for which Defendants are jointly and severally liable.

353. Defendants' acts and omissions have caused and/or threatened to cause injuries to the State's natural resources and property that are indivisible.

354. Defendants knew that it was substantially certain that their acts and omissions described above would threaten public health and cause extensive contamination and injury of State natural resources and property. Defendants' conduct in continuing to promote AFFF containing PFAS and/or PFAS, including PFOS, PFOA, PFNA, PFHxS, and/or PFHpA, to be used in AFFF was outrageously reprehensible.

XV. SIXTH CAUSE OF ACTION

Public Nuisance
(All Defendants)

355. The State realleges and reaffirms each and every allegation set forth in all preceding paragraphs as if fully restated in this section.

356. Defendants have manufactured, marketed, distributed, promoted and/or sold AFFF containing PFAS and/ or PFAS to be used in AFFF, including PFOS, PFOA, PFNA, PFHxS, and/or PFHpA, in a manner that created or participated in creating a public nuisance that unreasonably endangers or injures the property, health, safety and welfare of the general public and the State of Vermont, causing inconvenience and annoyance.

357. Defendants, by their negligent, reckless, and willful acts and omissions set forth above, have, among other things, knowingly unleashed long-lasting AFFF-related PFOS, PFOA, PFNA, PFHxS, and/or PFHpA contamination and injury of State natural resources and property throughout Vermont, having concealed the threat from all, thereby causing and threatening to

cause AFFF-related PFOS, PFOA, PFNA, PFHxS, and/or PFHpA contamination and injury of the State's natural resources and property. Defendants' AFFF-related PFOS, PFOA, PFNA, PFHxS, and/or PFHpA continues to spread in and contaminate more State natural resources and property throughout the State.

358. Each Defendant has caused, contributed to, maintained, and/or participated in a public nuisance by substantially and unreasonably interfering with, obstructing and/or threatening, among other things, (i) Vermonters' common public rights to enjoy State natural resources and property free from unacceptable health risk, pollution, and contamination, and (ii) the State's *parens patriae* ability to protect, conserve and manage the State's natural resources.

359. Each Defendant has, at times relevant to this action, caused, contributed to, maintained, and/or participated in the creation of such public nuisance. Among other things, each Defendant is a substantial contributor to such public nuisance as follows:

a. Defendants manufactured, marketed, distributed, promoted, sold, and/or otherwise placed into the stream of commerce AFFF containing PFAS and/ or PFAS to be used in AFFF, including PFOS, PFOA, PFNA, PFHxS, and/or PFHpA, when they knew, or reasonably should have known, that PFOS, PFOA, PFNA, PFHxS, and/or PFHpA would escape from those who store or use AFFF through leaks and other spills and contaminate State natural resources and property;

b. Defendants manufactured, marketed, distributed, promoted, sold, and/or otherwise placed into the stream of commerce AFFF containing PFAS and/ or PFAS to be used in AFFF, including PFOS, PFOA, PFNA, PFHxS, and/or PFHpA, that were delivered into the State (and areas affecting the State's natural resources and property), when they knew, or reasonably should have known, that PFOS, PFOA, PFNA, PFHxS, and/or PFHpA would be released readily into the environment during the normal, intended and foreseeable uses of PFAS-containing AFFF; and when released, PFOS, PFOA, PFNA, PFHxS, and/or PFHpA would persist in the environment and not break down, contaminate State natural resources and property, including soils, sediments, groundwater, surface waters, wildlife, and drinking water supplies, and, ultimately, be difficult and costly to remove; and

c. Defendants manufactured, marketed, distributed, promoted, sold, and/or otherwise placed into the stream of commerce AFFF containing PFAS and/ or PFAS to be used in AFFF, including PFOS, PFOA, PFNA, PFHxS, and/or PFHpA, that were delivered

into the State (and areas affecting the State's natural resources and property), when they knew, or reasonably should have known, that PFOS, PFOA, PFNA, PFHxS, and/or PFHpA posed substantial risks to human health.

360. Despite their knowledge that contamination and injury of the State's natural resources and property with AFFF-related PFOS, PFOA, PFNA, PFHxS, and/or PFHpA was the inevitable consequence of their conduct, Defendants failed to provide adequate warnings or special instructions, failed to take any other reasonable precautionary measures to prevent or mitigate such contamination and injury, and/or affirmatively misrepresented the hazards of PFOS, PFOA, PFNA, PFHxS, and/or PFHpA in their product information and/or instructions for use.

361. Defendants knew, or in the exercise of reasonable care should have known, that the introduction and use of AFFF containing PFAS and/ or PFAS to be used in AFFF, including PFOS, PFOA, PFNA, PFHxS, and/or PFHpA, would and has unreasonably and seriously endangered, injured, and interfered with the ordinary comfort, use, and enjoyment of natural resources and property relied upon by the State and its citizens.

362. Defendants have caused, contributed to, maintained, and/or participated in a public nuisance that has caused substantial injury to the State's natural resources and property, in which the public has interests represented by and protected by the State in its trustee and *parens patriae* capacities. Defendants' conduct also threatens to cause substantial additional injury to the State's natural resources and property. The public nuisance has caused and/or threatens to cause substantial injury to property directly owned by the State.

363. The contamination and injury of the State's natural resources and property with AFFF-related PFOS, PFOA, PFNA, PFHxS, and/or PFHpA is ongoing. PFOS, PFOA, PFNA, PFHxS, and/or PFHpA continue to threaten, migrate into, and enter the State's natural resources and property, and cause new contamination in new locations.

364. As a direct and proximate result of Defendants' acts and omissions, the State's natural resources and property are contaminated with AFFF-related PFOS, PFOA, PFNA, PFHxS, and/or PFHpA. The State has incurred, is incurring, and will incur, investigation, remediation, cleanup, restoration, removal, treatment, monitoring and other costs and expenses related to contamination and injury of the State's natural resources and property, for which Defendants are jointly and severally liable.

365. As a further direct and proximate result of Defendants' acts and omissions, the State has sustained and will sustain other substantial expenses and damages, including damages for loss of use and enjoyment, for which Defendants are jointly and severally liable.

366. Defendants' acts and omissions have caused and/or threatened to cause injuries to the State's natural resources and property that are indivisible.

XVI. SEVENTH CAUSE OF ACTION

Private Nuisance
(All Defendants)

367. The State realleges and reaffirms each and every allegation set forth in all preceding paragraphs as if fully restated in this section.

368. The State's property and public trust resources have been contaminated by AFFF-related PFOS, PFOA, PFNA, PFHxS, and/or PFHpA as a direct and proximate result of the intentional and unreasonable, negligent and reckless conduct of Defendants, all as alleged in this Complaint. These property and resources include state parks, beds and banks of surface water bodies, water wells, and resources held in trust by the State, such as groundwater.

369. As a direct and proximate result of Defendants' acts and omissions creating the above-described nuisance, the State has suffered injuries from contamination of State-owned property and public trust resources Defendants' acts and omissions have substantially, intentionally, and

unreasonably interfered with, obstructed, violated, and/or threatened, among other things, the State's interests in its property and public trust resources. This harm far outweighs any utility or benefit derived from this intentional conduct.

370. As a direct and proximate result of Defendants' acts and omissions, the State's property and public trust resources were and are contaminated with AFFF-related PFOS, PFOA, PFNA, PFHxS, and/or PFHpA. The State has incurred, is incurring, and will incur, investigation, remediation, cleanup, restoration, removal, treatment, monitoring and/or other costs and expenses related to contamination of the State's property and public trust resources, for which Defendants are jointly and severally liable.

371. As a further direct and proximate result of Defendants' acts and omissions, the State has sustained and will sustain other expenses and damages, including damages for loss of use and enjoyment, for which Defendants are jointly and severally liable.

372. Defendants' acts and omissions have caused and/or threatened to cause injuries to the State's public trust resources and property that are indivisible.

XVII. EIGHTH CAUSE OF ACTION

Trespass
(All Defendants)

373. The State realleges and reaffirms each and every allegation set forth in all preceding paragraphs as if fully restated in this section.

374. The State has significant property interests in the natural resources of the State. These property rights and interests include, but are not limited to, the State's public trust and *parens patriae* interests and authority in protecting such natural resources from contamination and injury.

375. A trustee by definition is authorized to take action to protect trust property as if the trustee were the owner of the property.

376. The State also brings this action in its *parens patriae* capacity on behalf of its citizens to protect quasi-sovereign interests, including the integrity of the State's natural resources. The State in its *parens patriae* capacity seeks relief for the invasion of its citizens' possessory interests by AFFF-related PFOS, PFOA, PFNA, PFHxS, and/or PFHpA.

377. The State never authorized Defendant's invasion of its natural resources and property with AFFF-related PFOS, PFOA, PFNA, PFHxS, and/or PFHpA.

378. The State owns in fee certain property within the State, including lands and water wells.

379. Defendants knew, or in the exercise of reasonable care should have known, that PFOS, PFOA, PFNA, PFHxS, and/or PFHpA are hazardous to natural resources and property, including groundwater, surface water, and public water systems, and including the property and interests of the State.

380. Defendants' acts and omissions directly and proximately caused and continue to cause AFFF-related PFAS to intrude onto and contaminate State natural resources and property, including water systems, surface water, groundwater systems, and zones of influence of the areas that supply production wells within the State.

381. At the time of Defendants' acts and omissions, Defendants knew with substantial certainty that AFFF-related PFOS, PFOA, PFNA, PFHxS, and/or PFHpA would reach onto and contaminate State natural resources and property, including water systems, surface water, groundwater systems, and zones of influence of the areas that supply production wells within the State. Defendants' knowledge was based on their knowledge of the properties of PFOS, PFOA, PFNA, PFHxS, and/or PFHpA and other conduct alleged in this Complaint. Despite this

knowledge, Defendants manufactured, marketed, distributed, promoted, and/or sold AFFF containing PFAS and/or PFAS for use in AFFF, including PFOA, PFNA, PFHxS, and/or PFHpA, with a profit motive in a way that has harmed the State.

382. As a direct and proximate result of the trespass, the State has been damaged and is entitled to compensatory damages for the costs of investigation, remediation, and treatment, damages for loss of use and enjoyment of the State natural resources and property, cost of restoring State natural resources and property to their original conditions as if the trespass had not occurred, and/or other relief the State may elect at trial.

383. As a direct and proximate result of Defendants' acts and omissions, the State's natural resources and property are contaminated with AFFF-related PFOS, PFOA, PFNA, PFHxS, and/or PFHpA. The State has incurred, is incurring, and will incur, investigation, remediation, cleanup, restoration, removal, treatment, monitoring and other costs and expenses related to contamination of the State's natural resources and property, for which Defendants are jointly and severally liable.

384. As a further direct and proximate result of Defendants' acts and omissions, the State has sustained and will sustain other substantial expenses and damages, including damages for loss of use and enjoyment, for which Defendants are jointly and severally liable.

385. Defendants' acts and omissions have caused and/or threatened to cause injuries to the State's natural resources and property that are indivisible.

XVIII. NINTH CAUSE OF ACTION

Violation of Voidable Transactions Act
(Historical DuPont, Corteva, Inc., DuPont de Nemours, Inc., and The Chemours Company)

386. The State realleges and reaffirms each and every allegation set forth in all preceding paragraphs as if fully restated in this section.

387. The State seeks equitable and other relief pursuant to the Voidable Transaction Act (VTA), as adopted by the State of Vermont, against Historical DuPont, Corteva, Inc., DuPont de Nemours, Inc., and The Chemours Company (collectively the VTA Defendants). 9 V.S.A. § 2285, et seq.

388. Under the VTA: "[a] transfer made or obligation incurred by a debtor is voidable as to a creditor, whether the creditor's claim arose before or after the transfer was made or the obligation was incurred, if the debtor made the transfer or incurred the obligation: (1) with actual intent to hinder, delay, or defraud any creditor or the debtor; or (2) without receiving a reasonably equivalent value in exchange for the transfer or obligation, and the debtor: (i) was engaged or was about to engage in a business or a transaction for which the remaining assets of the debtor were unreasonably small in relation to the business or transaction; or (ii) intended to incur, or believed or reasonably should have believed that the debtor would incur, debts beyond the debtor's ability to pay as they became due." 9 V.S.A. § 2288(a).

389. The VTA Defendants have (a) acted with actual intent to hinder, delay and defraud parties, and/or (b) without receiving a reasonably equivalent value in exchange for the transfer or obligation, and (i) were engaged or were about to engage in a business for which the remaining assets of The Chemours Company were unreasonably small in relation to the business; or (ii) intended to incur, or believed or reasonably should have believed that The Chemours Company would incur, debts beyond its ability to pay as they became due.

390. VTA Defendants engaged in acts in furtherance of a scheme to transfer Historical DuPont's assets out of the reach of parties such as the State of Vermont that have been damaged as a result of the VTA Defendants' conduct, omissions, and actions described in this Complaint.

391. It is primarily Historical DuPont, rather than The Chemours Company, that for decades manufactured, marketed, distributed and/or sold AFFF containing PFAS and PFAS for use in AFFF with the superior knowledge that they were toxic, mobile, persistent, bioaccumulative, and biomagnifying, and through normal and foreseen use, would impact the State's groundwater, drinking water, surface waters, fish, wildlife, and other natural resources, and State property.

392. As a result of the transfer of assets and liabilities described in this Complaint, the VTA Defendants have attempted to limit the availability of assets to cover judgments for all of the liability for damages and injuries from the manufacturing, marketing, distribution and/or sale of AFFF containing PFAS and PFAS for use in AFFF.

393. At the time of the transfer of its Performance Chemicals Business to The Chemours Company, Historical DuPont had been sued, threatened with suit and/or had knowledge of the likelihood of litigation to be filed regarding DuPont's liability for damages and injuries from the manufacturing, marketing, distribution and/or sale of AFFF containing PFAS and/or PFAS compounds for use in AFFF.

394. The VTA Defendants acted without receiving a reasonably equivalent value in exchange for the transfer or obligation, and Historical DuPont believed or reasonably should have believed that The Chemours Company would incur debts beyond The Chemours Company's ability to pay as they became due.

395. At all times relevant to this action, the claims, judgment and potential judgments against The Chemours Company potentially exceed The Chemours Company's ability to pay.

396. Pursuant to 9 V.S.A. § 2288(a), the State seeks avoidance of the transfer of Historicla DuPont's liabilities for the claims brought in this Complaint and to the VTA Defendants liable

for any damages or other remedies that may be awarded by the Court or jury under this Complaint.

397. The State further seeks all other rights and remedies that may be available to it under VTA, including prejudgment remedies as available under applicable law, as may be necessary to fully compensate the State for the damages and injuries it has suffered as alleged in this Complaint.

XIX. PUNITIVE DAMAGES
(All Defendants)

398. Defendants' reprehensible conduct in manufacturing, marketing, distributing, promoting, and/or selling AFFF containing PFAS and/or PFAS for use in AFFF was undertaken with conscious, willful, and wanton disregard of the probable dangerous consequences of that conduct and its foreseeable impact upon the State of Vermont. Defendants' conduct was outrageously reprehensible and malicious. Defendants acted and/or failed to act with conscious and deliberate disregard for a known, substantial, and intolerable risk of harm, with the knowledge that their acts or omissions were substantially certain to result in the threatened harm, and/or as a matter of free and intentional business choices. Therefore, the State requests an award of punitive damages to the maximum extent permitted by law in an amount reasonable, appropriate, and sufficient to punish Defendants and deter them from committing the same or similar tortious acts in the future.

PRAYER FOR RELIEF

The State of Vermont seeks judgment against all Defendants for:

A. Compensatory damages arising from AFFF-related PFAS contamination and injury of State natural resources and property, including groundwater, surface waters, drinking water supplies, biota, wildlife, and their associated soils, sediments, and uses, and

other State natural resources and property, according to proof, including, but not limited to:

(i) natural resource damages;

(ii) loss-of use damages;

(iii) costs of investigation;

(iv) costs of testing and monitoring;

(v) costs of providing water from an alternate source;

(vi) costs of installing and maintaining wellhead treatment;

(vii) costs of installing and maintaining a wellhead protection program;

(viii) costs of installing and maintaining an early warning system to detect AFFF-related PFAS before it reaches wells;

(ix) costs of remediating AFFF-related PFAS from natural resources including groundwater, surface waters, soils, sediments, and other natural resources;

(x) costs of remediating PFAS contamination at release sites;

(xi) any other costs or other expenditures incurred to address AFFF-related PFAS contamination and injury; and

(xii) interest on the damages according to law;

B. Injunctive and equitable relief to compel Defendants to abate the continuing nuisance and trespass by removing AFFF-related PFAS from State natural resources and property;

C. Ordering that the State is entitled to avoid the transfer of Historical DuPont's liabilities to The Chemours Company and put the State in the position it would have been had the transfer not occurred;

D. Punitive damages;

E. Costs (including reasonable attorney fees, court costs, and other expenses of litigation);

F. Prejudgment interest; and

G. Any other and further relief as the Court deems just, proper, and equitable.

JURY TRIAL DEMANDED

The State demands a trial by jury.

Dated: June 26, 2019

STATE OF VERMONT

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